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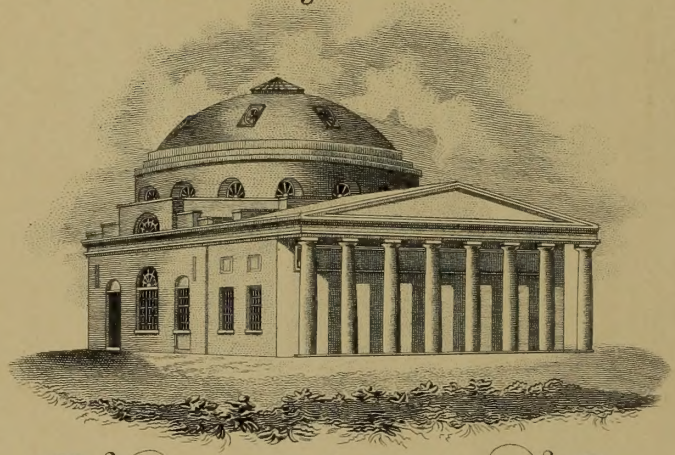

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

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[1] Pages in thesis are bound out of order, as follows: Title page – 17; 22-27; 30-31 (end); 28-29; 20; 18-19.

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Author	Title	Notes
Weisel, Daniel	Typhoid Fever	
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UNIVERSITY OF MARYLAND

THESES

1861 (a)

Nichols, Jeremiah	Typhoid Fever	40p.
McCullough, J. H.	Pneumonia	63p.
Thomson, T. Davis	Homoeopathy	65p.
Spath, Charles	Typhoid Fever	36p.
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Beatty, J. E.	Tracheotomy	31p.

An

Inaugural Dissertation

On

Typhoid Fever

Submitted to the examination

of the

Board of Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Jeremiah Nichols

of

Maryland.

MD
1892

Typhoid fever is
an acute affection occurring most frequently
between the ages of fifteen and thirty years
often previous to the former period and
but rarely after the fortieth year, alluvium
at least in cities and amongst adults in a
large majority of instances persons who are
recent residents, occasionally and under cer-
tain conditions capable of transmission from
one individual to another, rarely occurring
more than once in the same person, more common in
certain localities than in others, but not
confined so far as is known to any geograph-
ical localities or regions prevailing at all
seasons of the year and in all climates, but
more common in the autumnal than other
periods, and in temperate and northern

than in southern and hot latitudes. Sometimes sudden and sometimes gradual in its access. Attended at its commencement with chills or rigors not commonly very severe and usually repeated at uncertain intervals, for the first few days, then with more or less feverish heat of the skin, generally with increased quickness of the pulse, somewhat excelerated respiration, slight dry cough; and extensive sonorous or [illegible] rhonchus with pain in the head back, and limbs loss of the vigor and in grave cases perversion of the mind, dull expression of the countenance; more or less somnolence or watchfulness; giddiness or dizziness; [illegible] roaring or buzzing in the ears, occasional epistaxis; great loss of muscular strength; in grave cases with spasmodic twitchings of the muscles.

with entire loss of appetite, and with thirst; sometimes with nearly a natural appearance of the tongue, and at others with a red dark dry glutenous cracked trembling state of this organ; sordes upon the teeth and gums; occasional nausea and vomiting; frequently diarrhoea; abdominal pains and tenderness; these latter not unfrequently most marked in the right iliac region; dulness on percussion over the spleen; meteoric distention & rigidity of the abdomen, the skin particularly of the front part of the body being usually the seat in the course of the disease of a peculiar eruption but commonly abundant consisting of small circular or oval spots of a bright rose color slightly elevated above the surrounding surface and readily

disappearing under pressure; coming out successively one after another for several days [illegible] usually somewhat more than a week, and successively and gradually fading away and finally disappearing. [illegible] when drawn from [illegible] its proportion of fibrin diminished in a degree [illegible] corresponding to the gravity of the affection, when symptoms [illegible] in different [illegible] one of which is invariably met with, and several of which are [illegible] present enough generally to characterize the disease, which symptoms may either gradually diminish in severity and finally disappear between the length and the [illegible] of the disease or may increase in severity, and [illegible] between the seventh and [illegible] [illegible] the bodies of patients exhibiting, on

examination of the dead [illegible] a certain proportion of cases various pathological changes in the brain, heart, lungs, stomach, and liver, but in most cases enlargement or softening; or both of the spleen, and in all cases thickening or redness or a morbid deposition in the subcutaneous cellular tissue or ulceration or all these changes of the elliptical plates of the ileum with [illegible] and softening of the mesenteric glands corresponding in their position to the altered intestinal follicles, which disease thus characterized and defined differs essentially from all others in its causes in its symptoms, in its lesions, and is in the present state of our [illegible] limited extent under the [illegible] or control of art,

The premonitory symptoms frequently present

themselves by a disturbance of the functions of animal life. The poison in the blood having disturbed these functions before it causes any perceptible change in the circulation and consequently the patient is more or less depressed before the disease fairly sets in, he loses his appetite he is apprehensive of evil, his bowels become irregular his sleep is disturbed, he has wandering pains he is [illegible], and [illegible] sinks into disease, In other cases there are no premonitory symptoms, and [illegible] apparent health the disease suddenly [illegible] system, The onset of the fever is often marked by shivering and severe headache which is usually first experienced when the patient first arises in the morning. Diarrhoea is [illegible] concomitant, attended perhaps with pain or uneasi-

ness in the abdomen, and whether there has been pre-
monitory symptoms or [illegible] [illegible] [illegible]
[illegible] of the nervous system and alterations
in the functions of sensation, thought and
voluntary motion, or in other words [illegible] [illegible]
which is manifested by the altered expression of
the countenance, and the [illegible] and [illegible]
muscular power, and although the patient
may struggle against its power he cannot con-
quer or avoid the disease, During the onset
of the disorder we have such symptoms
presented [illegible] [illegible] [illegible] [illegible]
[illegible] system, There is increased rapidity
of the circulation characterized by [illegible]
of the pulse which often rises in young per-
sons and in females to a hundred
and twenty in the minute, While

in more robust constitutions the pulse does not rise so rapidly and may not exceed a hundred throughout the course of the disease. In any case the pulse should reach a hundred and thirty or forty there is eminent peril and a large majority of such patients die. If however the pulse is varying and shifting from one number to another it affords a much worse prognosis than its being very frequent and steady. The skin is hot and dry which is distinctly perceived by the impression conveyed to the hand when applied to the surface by producing a hot pungent sensation. The heat however is not so intense as the sensation given to the hand might persuade us it was [illegible] rising much above a hundred degrees. There is much thirst the tongue becomes dry sometimes [illegible]

but more often fured, and the edges and tip will perhaps be red then a white fur will begin which covers the central part or is divided by a straight brown streak through its middle potion and this streak is often the first step to dryness and blackness of the tongue, During this period the abdomen if carefully examined will reveal diseased action. Occasionally diarrhoea is an early symptom but generally I believe it is postponed to the next period when it does occur the stools are loose and [illegible] and generally of a dark color and [illegible] or of a yellow [illegible] appearance. If presure is made on the abdomen it will be found unnaturally hard and resisting, If the case is mild the diarrhoea

is frequently absent throughout the disease. And when present at all in mild cases it makes its appearance later in the disease is less urgent and of shorter duration. In most cases of the fever there is well marked and gradually progresive emaciation, not generally obvious before the end of the second week. If the disease is prolonged this emaciation is often extreme but if fatal at an early period this symptom is hardly noticed. Modifications in the urinary secretions are generally present in the commencement to copious, as the disease advances the urine becomes more highly colored and as it begins to decline lets fall an abundant sediment. On the subsidence of the fever there is often a grayish dirty deposition, Hemorrhage from the mucous membrane of

the nostrils is common in the course of typhoid fever and perhaps present in half the cases, it is apt to occur in the early half of its duration. It is generally small in quantity, at other times it is profuse. It is rarely if ever attended with or followed by relief. It seems to be less common amongst children than adults. The most common and characteristic eruption upon the skin consists in what has been called the lenticular rose colored spots, This is so common in typhoid and so rarely seen in any other disease, that it has received the name of typhoid eruption. It consists of a small spot (not a pimple) slightly elevated above the surrounding skin not always appreciable to the touch but generally so, about as large in circumference as the head of a pin

and of a bright red or rose color. This spot readily disappears under presure and as readily returns when the presure is removed. This eruption is almost an invariable accompaniment of typhoid [illegible]. It is found on various parts of the [illegible] but much more frequent than [illegible] on the abdomen and chest and then on the skin of the extremities and of the face [illegible] also upon the back. These spots may vary in number as well as in situation. To detect the elevation of the rose spots the finger must be passed lightly over the surface. They do not possess a well defined margin and their color fades insensibly into the surrounding surface. The duration of [illegible] is three or four days. Some makeing their

appearance and others disappearing. The number seen at one time is not very great. A very pale and delicate scarlet tint of the skin sometimes precedes the eruption. Another pretty common eruption consists in transparent vesicles to which the name Sudamina has been given. These are circular or oval vesicles are found by the presence of a limpid fluid elevating the cuticle. Their most frequent seat is upon the sides of the neck and about the shoulders and axillae, though they are sometimes scattered more extensively over the body. Chomel says he has never seen them on the face. They are most readily seen when looked at in an oblique direction they appear

dull dry appearance, and the cavity of the ventricles are in most cases diminished in thickness. These changes in the condition of the heart are usually accompanied with alterations in its color; the muscular tissue and the external surface are pale in many cases with a violet or livid tinge. The internal surface is sometimes pale, and sometimes of more or less deep violet red. The alterations are found more frequently and more strongly marked in cases which have terminated early than in those which have been prolonged. The aorta is frequently more or less changed in color on its internal surface. It consists of a morbid redness, sometimes in the form of bands

or patches sometimes generally diffused over the whole surface and extending to the bifurcation of the aorta. The intensity of the morbid color is generally in proportion to the softening and flexibility of the tissues of the heart. It is found in connection with the presence of blood in the aorta and the most extreme cases of softening of the heart commonly coexists with the presence of a dark soft non-fibrinous clot of blood in its cavities or with blood not coagulated but containing bubbles of air. The natural proportion of fibrin in the blood is diminished. Blood drawn from the veins during life rarely exhibits the buffy coat; and when this is present it is generally soft gelatinous or infiltrated

and of a grayish or greenish color. This characteristic of the blood has been particularly noticed by Louis, Chomel and Bouillaud, and the results of their observations have been abundantly verified by the subsequent and more accurate researches of Andral and Gavarret. They found that the diminution of fibrin was very uniformly proportionate to the severity of the disease. These observers found a similar [illegible] of the blood in the eruptive fevers while in all cases of simple acute inflamation the quantity of fibrin was about its natural standard. Neither the symptoms nor the lesions go to show that the lungs play any very active or important part in the

numerous and complicated phenomena of typhoid fever. The most characteristic alteration is described by Louis and has been called splenization or carnification of the lung; the portion of the lung thus carnified is of a deep bluish red color; it has a tough feel; the finger penetrates and breaks it down with difficulty; it is wholly destitute of air and sinks in water. When it is cut the smooth surface is directly covered with a thick red fluid. This peculiar lesion almost always occupies a circumscribed portion of the lower and posterior lobe of one or both lungs. The mucous membrane of the bronchial tubes is frequently of a more or less livid red color. That of the trachea is occasionally colored in the same manner but is

rarely the seat of any inflammatory lesion. The same is true of the larynx. The epiglottis is more frequently and severely diseased. Ulcerations of the pharynx are very rare. From the frequency and severity of the symptoms consisting in deranged action of the brain it would have been supposed that this organ would have exhibited corresponding alterations in its appearance; such however is far from being the fact. Of thirty eight cases reported by Clarke in which the brain and its membranes were carefully examined, fifteen presented no appreciable alterations in these organs. The most common change in a certain proportion of cases consisted of serous effusion various in degree, in twenty eight cases vascularity of the pia mater

in somewhat less than one half, the rosy tinge of the cortical substance uniformly diffused throughout its entire extent in seventeen, and injection of the medullary substance in eight. This injection is generally proportionate to the red color of the gray substance and both phenomena are most common and strongly marked in cases which terminate early; the serous effusion on the other hand are more frequently found in cases that have been protracted. In rare cases there is a slight increase or diminution in the consistance of the brain, besides some other unimportant and accidental alterations. In regard to the nature of these several lesions there is amongst pathologist

a difference of opinion. There is no ascertained relation between the central symptoms during life and the pathological condition of the brain and its membranes appreciable after death. Nor are these lesions peculiar to typoid fever, since they are found almost as frequently in patients dead from other acute diseases, exclusively of those of the brain itself and its envelopes as in those dead from the fever. In a large proportion of cases of typoid fever the pharynx and esophagus are found in their natural state. The only lesion of considerable frequency consists in ulcerations of their mucous lining. The mucous membrane of the stomach is generally more or less removed from a

healthy condition. It is the result of various alterations. The most common consists of changes in its color, its consistency, its thickness, in mamilonation, and ulceration. These alterations may exist seperately, or as happens more frequently, two or more of them are found together. The most common change of color consists of increased degrees of redness. This redness is of various shades and occupies different portions of the stomach, most commonly the larger extremity, and seems to be dependant on different causes. Softening of the mucous membrane sometimes exists as a simple lesion, it is frequently associated with a diminution

of its natural thickness. This alteration either simple or complicated is found in all parts of the membrane, but it is oftenest confined to the cardiac extremity of the stomach with thinning is found nearly always in those cases which terminate early. Ulcerations of the mucous membrane are present in a few instances. There is another lesion called mamelonation which consists of small elevations of the membrane pretty regularly disseminated in form and scattered thickly over different portions of the stomach This condition exists in connection with other alterations particularly with softening and increased redness.

In all cases of typhoid fever there are lesions of the small intestines. This peculiar lesion is found in no other disease. It is generally extensive. Constituting the characteristic and the most interesting and important pathological element of typhoid fever. The duodenum is frequently natural; at other times the mucous membrane is morbidly red softened and very rarely the seat of a small number of minute superficial ulcerations. The small intestines are usually distended with gases in a few cases their contents consist of a considerable quantity of mucus especially in the upper portions and of liquid bilious matter of a light yellow color sometimes thin and

with red. In cases where there has been hemorrhage from the bowels blood either coagulated or dark colored and grumous is found in the intestines.

The invariable and characteristic lesion is found in the small intestines. to which allusion has been made, consists in alterations differing somewhat in different cases, of the elipticle plates or Peyer's Glands. Without entering into any minute description of the several forms of this lesion I will enumerate the principal and more striking varieties. In a small proportion of cases that terminate early. the elipticle plates together with the subjacent cellular tissue are nearly increased in

thickness with redness and softening. This increase of thickness is such that the edges of the plates have been known in rare cases to project above the surrounding mucous membrane. Sometimes the hypertrophy is quite simple, the normal consistence remaining unaltered. This simple form of the lesion is found most strongly marked at the lower extremity of the ileum. From twelve to forty plates are thus affected in the great majority of cases. The plates instead of being merely thickened, are the seat of ulceration; these ulcerations vary in size and number. It frequently happens that in proceeding from above downwards in examination of the ileum

pased over several plates simply thickened one is found in which there is a single circumscribed ulceration, with perpendicular edges extending into the thickened tissue, near the termination of the intestine the ulcerations become more numerous and extensive. At last for several inches next to the valve the plates are entirely destroyed and ulcerations are found corresponding to their size and shape their edges are in most cases pretty regularly perpendicular and smooth. They consist sometimes of the cellular tissue immediately under the mucous membrane; sometimes of the muscular coat and sometimes of the peritoneal covering. Occasionally this covering gives

way perforation takes place and the contents of the intestines are discharged into the cavity of the peritoneum. It is a singular fact that fatal [illegible] commonly occurs in the course of very mild or almost entirely latent forms of the fever. M. Forget describes the lesions of Peyer's glands under six different forms. The first of these he calls the punctated or pointed form. It is not often met with. The second form is the reticulate. The third the honey comb, the fourth the pustula. The fifth the gangrenous. The sixth is the ulcerated form. There are but two alterations of the large intestines especially connected with typhoid fever. These are distention by flatus and ulcerations. The

[illegible] distention is present in a large proportion of cases. Ulcerations are found in about one third of the cases. They are generally small in size more or less rounded not very numerous more superficial than those of the small intestines and occupying most frequently the Caecum though not confined to this portion of the large intestine.

The glands of the mesentery are always found more or less changed. Where death takes place before the expiration of the third week they are increased in volume, diminished in consistance and of a red color. If life is prolonged beyond this period the volume is found more nearly natural. The other [illegible]

are affected in a similar manner. The spleen is almost always more or less altered in its appearance. The most constant change consists in an augmentation in its volume. It is generally diminished in consistence. The color is darker than natural. The only alteration of any considerable frequency in the liver consists in softening. The Pancreas; Salivary Glands; Urinary Apparatus and Sexual Organs, are generally found in a healthy state.

The only causes of typhoid fever which has been accurately ascertained are: recent residence in a given place and contagion. It is not settled how far typhoid fever is influenced by the different seasons of the year. The common

impression in New England is that it prevails oftenest in the [illegible]

The general opinion has been that typhoid fever is not contagious. It is however under certain conditions undoubtedly contagious. After an attack of typhoid the individual injoys a perfect immunity from the disease. It occurs in a sporadic and epidemic form. Single isolated cases are often met with, and it often prevails as an epidemic.

It most frequently occurs in individuals between the ages of eighteen and twenty five. Race does not exercise any influence over the disease. Occupation does not predispose to the disease. In regard to filth and unhealthy food there is no satisfactory evidence of their operation

The treatment of hip joint is less
difficult than that of any of diseases
of equal frequency and importance the
therapeutics of which was thrown in
much confusion. It is impossible,
within any reasonable limits to describe in
detail [illegible] adopted and advocated. The very
different methods of treating the disease
[illegible] circumstances. Whether the
treatment be purely [illegible]
or by [illegible]
of traction, [illegible]

entire abstinence from [illegible]
[illegible] should be enjoined. When the disea-
se is marked by bilious symptoms
the same general course is to be pursued.
If the disease comes on suddenly, and
[illegible] stomach
[illegible]
[illegible] may be useful. In the ataxic
form of the disease [illegible]
[illegible] indications. If it is attended
with [illegible] inflammatory symptoms [illegible]
[illegible]
pursued [illegible]
[illegible] tonics and [illegible]
In the [illegible] form of the [illegible]
[illegible]
and stimulant treatment adopted

in activity to the degree of prostration and debility. This course is highly necessary in those cases where the failure of muscular strength is extreme: indicated by the difficulty and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ness of the voice; the sinking of the features; the [illegible] of the [illegible]; sighing and faintness on assuming the sitting posture; smallness and weakness of the pulse; and coldness of the surface. It is necessary to administer tonics aromatics and cardials. such as cinchona wine. camphor and other Chomel prefers the cinchona in the form of the extract administered in an aromatic [illegible], & the amount of one or two ounces in the twenty four hours. It is [illegible] to the sulphate of Quinia [illegible] [illegible] more

ient of administration, also in decoction or in extract in the form of enemata. While in the adynamic form and before the necessity for the free use of Cinchona has yet appeared, the Sweeter wines such as Madeira, Sherry and Port must be resorted to. These may be given to the patient in his drinks or in more grave cases undiluted. The quantity to be administered must depend upon the urgency of the symptoms calling for its use. A table spoonful of one of the strong wines may be given at intervals of from one to three or four hours. The effects of these remedies must be carefully watched; and if the produce flush heat and restlessness, pain in the head

or any other [illegible] [illegible] [illegible] [illegible]
use must be suspended or modified.
It is [illegible] [illegible] [illegible] [illegible]
or [illegible] [illegible] [illegible] [illegible] [illegible]
tonic and stimulant medication is
[illegible] for, Ether should be used when
there is an urgent necessity for rapid
and immediate stimulation which
may be combined with cinchona. In
extreme cases must by the mouth and
rectum may be used. Blisters should
be avoided as they cause more evil than
benefit. The epistaxis will not often
require attention. If copious cold astrin-
gents solutions will generally arrest it
if not resort to mechanical compression
by plugging up the nostrils

To control the hemorrhage from the bowels, iced water for drink, in injections and applied upon the abdomen: lemonade and the extract of rhatany. The formation of ulcers should be guarded against by avoiding pressure and when formed should be properly dressed. Local inflammations are to be met by local and general bleeding, or dry cupping and sinapisms near the inflammation. Perforation of the intestine is to be treated by entire abstinence from drink and food, absolute rest, and large and repeated doses of opium. Careing convalescence mild diet and the avoidance of fatigue. In addition to the above treatment the chloride of soda in a sweetened solution of gum —

Arabic containing from one grain to one grain and a half to the ounce. Given in large quantities is generally beneficial.

An
Inaugural Dissertation
On
Pneumonia,
Submitted to the examination
Of
The Provost, Regents and
Faculty of Physic
Of
The University of Maryland
For
The Degree of Doctor of
Medicine
by
J. Haines McCullough

Pneumonia

The term pneumonia in its strict sense signifies inflammation of the lungs, and is characterized by "rapid, short and sometimes oppressed respiration; cough and expectoration referable to the lungs."

As there are few diseases in the long list to which the human family is heir more distressing and more rapid in their course or more fatal in their ravages than pneumonia; it is requisite that a physiological and pathological knowledge, as well as an anatomical should be understood of those organs to which it is confined in order that we may comprehend fully the law

nature of the [illegible] and [illegible] be able to treat it more successfully.

1st When studying the anatomy of the lungs, we find them to be two conical organs, situated one on either side of the cavity of the thorax, embracing the heart and separated from each other by that organ and a membranous partition called the mediastinum. The base of each lung rests upon the convex surface of the diaphragm, and their apices or cones extend to a slight degree above the level of the first rib. Their external surface is convex to correspond with the internal or concave surface of the thorax, while their internal is concave to correspond with the convexity of the heart.

their posterior border is broad and long while their anterior is short and sharp.

The lungs present a brownish mottled color and their surface is irregularly traversed by lines which represent the lobules of the organs and these again by other lines which mark the smaller lobules. The weight of the lungs is about two pounds and a half the right being about two ounces heavier than the left. Each lung is divided into two lobes by a longitudinal fissure, extending from near the apex on the posterior surface to near the anterior angle of its base. The right lung is rather larger than the left; in

consequence of the inclination of the heart to the left side, but somewhat shorter in consequence of the convexity of the liver which presses the diaphragm considerably upwards into the right portion of the chest. Each lung is retained in its position by a root, which is composed of the pulmonary artery, pulmonary veins and bronchial tubes, together with the bronchial and pulmonary plexuses of nerves. The lung is composed of an assemblage of air cells, which are the terminations of the bronchial tubes, of the ramifications of the arteries and veins and of lymphatics and nerves. The whole of these being connected by areolar tissue constitute

the parenchyma. When the parenchyma of the lung is examined either on the surface or by section, it is seen to consist of small polyhedral lobules connected together by interlobular and lax tissue. These may be seen to consist of smaller lobules which are formed by an assemblage of air cells, in the parietes of which may be seen the ramifications of the pulmonary artery and vein or rather the capillaries of these vessels. Each lobule taken alone is supplied with a separate bronchial tube, pulmonary artery and pulmonary vein, and is isolated from surrounding lobules by an elastic membrane derived from the sub serous

tissue. The entire lung is composed of an assemblage of these lobules so connected and so separated, yet held together by a serous membrane as called, the pleura. This membrane envelopes the lungs as far as the root and is then reflected upon the parietes of the chest. That portion which is in relation with the lungs is called the pleura pulmonalis and that in relation with the parietes, pleura costalis.

2nd When we take a physiological view of these organs and note that to them one of the most important functions in the animal economy is allotted. - Respiration - that the thoracic

of. this important function is to place
the constituents of the blood - a mixture
of lymph and chyle with venous -
in contact with atmospheric air
in order that it may obtain the life
sustaining qualities of Arterial blood,
that in this act carbonic acid, - an
acid frightfully deleterious to an-
imal life, - is exhaled. And in order
that this act may be performed, forty
five thousand cubic inches of oxygen
gas, is required to furnish the air
cells of the lungs of an ordinary
man every twenty four hours. we are
at once struck with the importance
of their office and the gravity of a
disease almost wholly confined

to thin tissue, of an inflammation causing an infiltration into thin cells, thus preventing the access of atmospheric air, favoring the accumulation of carbonic acid in the system and sooner or later causing death by its poisonous properties, if not speedily removed - such is the nature of pneumonia.

3rd "In taking a pathological observation of the lungs as affected by pneumonia, we find "inflammation and its usual consequences in thin parenchyma, in many cases implicating the air-cells and small bronchi on the one hand and the pleura on the other." Although this definition is sufficiently decisive, yet it cannot

be considered definite, for as yet, pathologists have not fully determined as to the precise seat of pneumonia, While some contend that the inflammation commences in the vessels and submucous tissue connecting the air cells, others assert that "it is seated in the cellular tissue of which the parenchyma of the lung is partly constituted, and others again hold that "it is confined to the cells and minute tubes and that it differs from bronchitis only in the phenomena of solidification, suppuration and abcess, Whether these suppositions be true or false, it is only necessary to note, that the morbid action set up in or by either, is sufficient to

produce such an engorgement and infiltration as to obliterate the cellular structure of the lung and produce symptoms similar to those of pneumonia.—

To constitute pneumonia it is not necessary that the whole of both lungs should be engaged in the inflammation, neither the whole of one or a portion of both. For these reasons some pathologists have distinguished the disease by different terms according as it extends to the whole or portions of the lobes or to single bunches of vesicles viz: lobar, lobular and vesicular.

The first of these, the lobar is the most common and may be confined to a portion of one lobe, to the whole

of one lung or to a part of both.
It is decidedly the most dangerous
as the inflammation extends over a
greater extent. The lobular form
is characterized by its being confined
to a few isolated lobules and by
being circumscribed by the inter-lobular
tissue, While the vesicular is confined
to the air-cells as Andral supposes. It
appears in small spots of a bright red
color and these are surrounded by healthy
tissue. From the observations of
Andral and other authors of notority,
it has been shown that pneumonia
occurs more frequently in the right than
in the left lung. But of 1131 cases
Dr. Hobbs has shown that the right

lung was affected in 562 cases, the left in 333 cases, and that both were affected in 236 cases. This has been proven satisfactorily. Yet why it is so remains unexplained.

In relation to this question I would mention a thought. It has been said that pneumonia cannot exist without some degree of bronchitis and that it may either precede the pneumonic inflammation or depend upon it. That it is present is true and that it precedes it most likely. Admitting this to be true, and taking into consideration, that the bronchial tube leading to the right lung is necessarily larger

And smaller than that supplying the left; that a greater extent thereof mucous membrane is exposed to the deliterious influences of the atmosphere and that pneumonia may depend and very often does upon the same causes which set up bronchitis - viz: cold, noxious gases, the inhalations of small particles of matter floating in the atmosphere, insects &c. We have then one reason by which this phenomenon may be explained.

Those also who hold that pneumonia does in a great number of cases commence and confine itself to the middle of the organ in a measure, may maintain their belief from

the fact that at or near this point the tubes commence their bifurcations. And anything which has a tendency to excite the disease may be concentrated to this point, and there produce its characteristic effects. We might confine our remarks especially to those causes which irritate mechanically - they not being so readily admitted into the smaller bronchi - and speak of it as being emphatically true, in the endemic and epidemic forms -

Complications -

Pneumonia may be considered as existing in two forms - acute and Chronic. The first - Acute form, depending -

not of any Constitutional diathesis peculiar to pulmonary deposit, but upon some immediate exciting causes of which long continued exposure to cold and damp are the most frequent. While the chronic form although of very rare occurrence and as Dr Stokes remarks "difficult to define" doubtless occurs in individuals of a strumous habit, in those whose idiosyncracies are towards tuberculous formations in the lungs and as the sequela of the acute form.

Although there is no necessary connecting link between the acute and chronic forms of disease as they exist in the great internal organs of the body

Yet there are various forms and complications - A few of which, and the most important for the sake of brevity I shall notice - almost constant attending them, which the physician is called upon to note and with which he should be prepared to conflict.

Of the diseases therefore with which pneumonia may be complicated there is none perhaps more serious nor yet more common than an inflammation of the pleura. At this we need not wonder. When we consider, that the pleura is but a thin yet closely investing membrane of the lungs nourished by the blood vessels supplying their substance, thus approximating

and liable to take on any morbid action involving their external structure. This form or complication is termed Pleuro-pneumonia. And is manifested by symptoms not materially different from those of simple pneumonia only that the pain is more acute and dyspnoea more oppressive.

We have another complication, in which the inflammation occurs in persons of a gouty or rheumatic predisposition. It is of common occurrence and as Dr Todd remarks "Comes on in the middle of an attack of acute Gout or Rheumatism, or at other times occurs in the attacks. While in a third, it follows the con-

constitutional malady.— When there is diminution in the force of the circulation, When we have inflammation of the lung coming on in low enfeebled conditions of the system, When there is great prostration— in one we have an adynamic condition of the system. We have then a form termed typhoid pneumonia

A form of pneumonia following severe injuries to the chest and surgical operations is termed traumatic. It is known of rare occurrence, For the 13th day of June 1860. A German twenty two years of age and by profession, a sailor, was brought into the Baltimore Infirmary, to receive medical aid

Some days previous to his arrival, he stated that he had fallen from one of the cross beams upon the deck of the ship, in such a manner as to injure himself internally about the region of the chest. Examination proved it to be a well marked case of traumatic pneumonia accompanied by some degree of effusion into the pleural sacks. Proper remedies however being exhibited, he recovered, and in a fortnight, he was able to leave the hospital.

Obsns.

Pneumonia in its combined acceptation is accom-

-pained by three stages or conditions, almost always constant, and very readily distinguished from each other as the inflammation proceeds.

The first stage or condition is that of engorgement - sanguineous engorgement - or active congestion. The lungs in this stage are of a deep red color, crepitate less upon pressure than usual in consequence of the effused fluid into their cells. They are non-elastic and retain in a measure the impression made by the finger. In this stage the cohesive power is diminished and the lungs resemble the spleen, in consequence of being more easily torn, - from which circumstance some have

turned this the stage of splenization.
Although there is a fluid engorgement of the lungs in this stage, yet they contain a sufficient amount of air in their cells as to float them on water

The second stage is only an advanced state of the first, in which the inflammation continues and the plastic material which was effused into the air-cells and constituting the first stage, becomes solidified. In this stage the lungs still present a red color but have ceased to crepitate, and sink in water from the fact that no more air is contained in their cells. The lungs in this stage are decidedly solid having lost

their former spongy texture. If a section of the organ be made at this period of the disease, we find the cut surface presenting an appearance similar to that of the cut surface of the liver — hence the term hepatization assigned to this condition of the lungs by Laennec.

So rapid indeed is the transition of the first into the second stage, that auscultation — one of the principal and surest diagnostic means fails in many instances to detect it. Laennec however states that a fine crepitant râle may be heard on listening to a lung in the first stage of pneumonia, which is speedily followed by signs of hepatization.

In this too a lesser quantity of red fluid exudes from the cut surface, It is more dense, assumes the character of pus, and manifests signs of commencing suppuration. The lungs in this stage will not collapse when the thorax is laid open, because their cells are filled with solidified matter. Dr J. Watson states that "the lungs are swelled in fact just as any other inflamed parts by the congestion of their vessels and the effusion of blood or some of its constituents- The lungs in this condition are less consistent, sometimes so much so as to break down under the least pressure and assume the nature of pulp - hence, Rudral pro-

process to call this stage of pneumonia,
"red softening or ramollissement rouge."

In the third stage the red color has passed away, but the lung still remains solid and assumes a grey color, not unlike that of Granite. In this stage the lung substance is more friable and upon the slightest pressure breaks down, and thus in character resembles pus. If an incision be made into the substance of the lung, whilst in this condition, a grey purulent matter exudes from the cut surface in the shape of small drops, devoid however of any offensive odor. From these facts it has been termed the stage of Grey hepatization or purulent

infiltration, by some and by others Grey softening and diffusive suppuration of the pulmonary tissue

Owing to the cellular structure of the lungs and the facility with which matter can permeate and infiltrate the tissue, it is seldom that an abcess is formed. Although it is of rare occurrence, yet Dr Stokes asserts that he has seen acute pneumonia, under three forms. "1st As an encysted abcess with all the characters of true phlegmon," "2nd As purulent cavities communicating with the bronchi and without any cyst, the walls of the abcess being formed of the solidified lung,"

and 3rd Var. the abcess is sealed under the pleura and external to the pulmonary tissue, dissecting the latter from the cover so as to show the structure of the lung.

Gangrene of the lungs is almost as uncommon as abcess, yet depending as it does on acute inflammation, sometimes occurs in the course of pneumonia. This condition of the lungs is easy of diagnosis from the fact that the exhalations from those organs are accompanied with a most disgusting and horrible odor. We find on post Mortem examination of the a large portion of the lung involved in this Gangrenous condition.

and at times a circumscribed portion.
The part thus affected is of a dirty brown
or olive color, moist and admits a
factor almost unendurable,

It has been observed in all cases
of acute pneumonia that the mucous
membrane of the bronchial tubes
large and small ramifying through
that portion of the lung inflammed
is also inflammed so that it seems
impossible for pneumonia to exist
without some or a corresponding degree
of bronchitis

Physical Signs

On applying the
ear to the surface of the chest when the
lungs are in their natural and

normal condition. When nothing occurs to prevent the ready admission of air into the chambers a low murmuring sound is audible. This is the respiratory murmur and is not unlike that produced by the wind as it gently passes amidst the branches of trees. When however the lungs are in the first stage of inflammation or that of engorgement, a different sound meets the ear and conveys to the mind the morbid condition of the organs. Instead of the gentle murmuring rustle we hear an interrupted or crackling sound resembling in its character the explosions of salt when scattered over hot coals. Dr Drake says "that this

sound is similar to the noise produced by crumpling fine parchment. Dr. Williams mentions that a good correct idea of this sound may be obtained by rubbing a lock of one's own hair between the finger and thumb close to the ear, & Laennec calls it crepitant ronchus. While Dr. Watson defines it as minute crepitation or the crackling of pneumonia. This sound as supposed at the present time proceeds from the smallest ramifications of the bronchi and from the air vesicles themselves. It depends on the passage of air thro' a liquid and upon the formation and bursting of numerous little air

bubbles. It is truly a very important diagnostic sign as it marks the first stage of inflammation, and which if not noticed and unrelieved may very soon lead to those which denote that the inflammatory action has passed from the first into the second stage.-

Physical Signs of the Second Stage-

The auscultatory signs by which the stage of hepatization is revealed to the mind, are simply an increase or aggravation of those of the first stage. On applying the ear to the chest when the lung is in a state of consolidation, we do not hear the respiratory murmur or vesicular rustle, which attends it in its normal

condition, neither the normal respiratory sound, which accompanies the stage of engorgement, but instead of this we hear a sound similar to that heard on blowing through a quill This sound has been denominated bronchial respiration, It depends on the passage of air through the larger bronchi and the non-permeation of the air-cells.

Although of necessity the air which we breathe must pass through these larger bronchi before it can gain entrance into the air chambers, yet the lung in its normal condition and in the first stage of pneumonia, is not solidified around the tubes, con-

regarded being a bad conductor of sound in that state, we fail to hear bronchial respiration or any of the sounds dependant upon and audible during the stage of hepatization. The voice is also altered during this stage. It descends into the bronchi, and thence is conveyed to the ear of the listner through the solid portion of the lung. It resembles the voice of one speaking through a tube and has been called bronchial voice or bronchophony. Thus, Dr. Watson describes as being striking sounds, that it requires no great tact to distinguish them and when once heard remain impressed forever upon the mind -

Dulness on percussion is also a striking sound and manifestation of this stage of pneumonia. It varies according to the extent of hepatization. If a small portion of healthy lung intervenes between the solid portion and the walls of the chest there is still dulness, but it not so marked as when solid lung comes in contact with the walls of the chest. When the whole of one lung is hepatized or a portion of one, puerile respiration is heard over the regions of the healthy organ or organs. And shows that a portion of the respiratory apparatus is disorganized and that the healthy lung is endeavoring

to sustain the loss.

Physical signs of the third stage.

The transit of the stage of hepatization into that of the third or stage of suppurative infiltration, Auscultation fails to assure us. The physical signs are not materially different from those of the second stage, until the structure of the lung breaks down and matter is effused and accumulates in the bronchi. Then we hear a sharp, peculiar mucocrepitating sound. The bronchial respiration and dullness on percussion still continue. In this stage the fever often assumes an asthenic form. While a weak, small pulse frequent

respiration; a sense of suffocation; a pained countenance; livid lips; and low delirium, mark the extent of local lesion and the effects consequent upon it.

In connection with the physical symptoms which speak in a language sufficiently distinct as to impress upon the mind of the practitioner the seat and extent of local lesion - We have another set of signs which although not always constant appear in a sufficient number of cases as to mark conclusively the presence and severity of pneumonia. These are the rational signs of which pain. dyspnoea, delirium

cough and expectoration constitute the principal.

The pain of these pain in simple pneumonitis, is but trivial, and seldom demands attention. But it is always present when the inflammation extends to the pleura.- That is when some degree of pleurisy is present. When this condition occurs we then have pleuro-pneumonia. Pain is increased by cough or deep inspirations, by pressure or percussion. and by sudden changes of posture. The patient lies upon his back from the fact that when he reclines upon the affected side pain is increased by the pressure and when he lies upon the sound

side breathing is impeded in the healthy lung, by the diseased organ pressing upon it and its own gravitation to the walls of the chest, thus forming an obstacle to its free action.

Dyspnoea is a symptom which is more urgent in bronchitis than in pure pneumonia and its amount generally indicates the extent with which bronchitis is associated in the inflammatory process. Sometimes it is so slight as to be hardly noticeable at others so severe as to prevent the patient from lying down; his nostrils become expanded; his shoulders elevated; and his general expression that of the utmost anxiety.

Delirium is a symptom of great importance. When it occurs in the course of pneumonia. It is also a very unpleasant one as it denotes that the blood is not properly arterialized being interfered with by the pulmonary affection and throws upon the brain, falls upon that organ in the production of this symptom.

The Cough in simple pneumonia is generally so trivial as not to produce much uneasiness. It is short slight and dry at the commencement of the disease and is severe only in proportion to the extent of bronchia affected and the severity of the inflammation. In a short time how-

ever the dry cough is accompanied by an expectoration, of a viscid mucopurulent character. While the expectoration may afford us decisive evidence of pneumonia, yet in some cases it is entirely absent in children in whom especially, pneumonia is most common and most dangerous it affords us no diagnostic aid. The sputum expectorated about the second or third day assumes a rust-colored or tawney tint and is of so tenacious a character as to remain adherent to the vessel when turned bottom upwards. This characteristic tint depends no doubt upon the fusion of blood and mucous and is in creas-

ed or diminished according as the one or the other obtains.

Dr Watson observes that the "spuld composed of very red mucous, indicate less surely pneumonia than such as are tawney." "The masses, he states "in which there is more blood than mucous often belong to pulmonary apoplexy."

This pulmonary apoplexy may be considered "or is I believe, a complication of pneumonia or as giving rise to symptoms analagous to it.

Should the inflammation pass on to gangrene, then the matter assumes a dirty greenish tinge, a foetid odor and a more liquid consistency. When the process of disorganization has ad-

vanced thus far, then the powers of life begin to fail, the expectoration diminishes in quantity, not however from a diminution of secretion, but from a failure of respiratory and vital acts, as are sufficient to produce its expulsion -

Death then following this phase of the disease, is preceeded by increased mucous ronchus, Matter still accumulating in the larger bronchi; reaches at last the trachea - Whence the sound proceeds which has been turned the "death rattle.

There is another symptom, although of recent discovery and not in immediate connection with those above

mentioned, yet it obtains in the minds of some medical men as a symptom of superlative value in the diagnosis of pneumonia. That a diminution of all the saline matters in the urine occurs especially during the stage of hepatization, was first discovered by Heddintacher in Germany.

The salt in which the diminution is greatest, is the chloride of sodium, being most marked during the stage of hepatization, at which time it is almost wholly absent from the urine - That this salt is or is not present may be revealed by a chemical test, so simple that it may be employed by any one.

It consists in placing about a drachm of the urine in a test tube and adding a little nitric acid to this add a few drops of a solution of nitrate of silver. When if any chloride be present a white flocculent precipitate appears, but if no precipitate occurs on the addition of the nitrate of silver then we may conclude that there is no chloride present in the urine - For this sign and test we are indebted to Dr. Todd - whose work on Acute Diseases, contains a very interesting Article on pneumonia, its Complications and treatment, Prof. Hammond, called that in numerous cases of pneumonia

he had tried this test and found it always to hold good. It is not always conclusive evidence as Dr Todd remarks, from the fact that the chloride of ammonium is occasionally present in the urine, forming when the urine is treated as for chloride of sodium a similar precipitate. As a prognostic sign this also is valuable. When favored by a favorable termination we find as the inflammation subsides that the chloride of sodium returns to its natural element and is eliminated from the system thro' the ordinary channels. That there is an attraction for this salt in the

inflammed lung has been demonstrated by Dr Beale, who has shown that it accumulates in the cysts and inflammed portion of the lung, while at the same time it diminishes in the serum of the blood, Whether an attraction for this salt exists in other inflammed parts, science has not yet decided, We imagine however that there is.

To form then a diagnosis definite and complete, we must not confine ourselves to a physical inquiry alone neither to a rational manifestations, for while in the former Auscultation and percussion fail to detect signs upon which to base a satisfactory

opinion, so also does the eye and reasoning powers fail to impress upon the mind a similar. On General symptoms alone then must we frame our diagnosis and hope for a speedy resolution or decide upon a fatal termination

Prognosis

Among the symptoms then which should guide us as to deciding upon a favorable or unfavorable termination of pneumonia, respiration expectoration, duration and a return of chloride of sodium to the urine are the most important. If the breathing continues difficult and frequent, accompanied by fever a quick, weak

pulse, and delirium; if the sputa continue of a dark rusty color or assume a greenish hue and are of less consistency than previously, we may conclude that the case will terminate fatally. But if a modification of these symptoms occur; if the respiration becomes less frequent and laborious; if on percussion dulness diminishes; if bronchial respiration subside; if the sputum loses its characteristic hue and returns to that of a catarrhal aspect; if the respiratory murmur gradually obscures the crepitation; if the fever, uneasy sensations and delirium abate; if the disease has

not gone beyond the 10th or 14th day;
if common salt return to the urine,
then we realize a favorable prognosis and note an entire resolution

Causes

Of the causes which excite pneumonic inflammation, there are none more common than long exposure to cold and wet. This fact is exemplified in the person of those who are most exposed, viz Sailors, coachmen, farmers, draymen &c These are most apt to reduce the activity of the circulation and thus promote the congestion of the lungs especially when the system is in a debilitated condition from any cause

weather, Climate; vicissitudes of the seasons and temperature; immediate removal from a warm atmosphere into that of a colder; exposure of the person to excess; protracted and severe labor are causes upon which pneumonia very frequently depends. It has been admitted by some writers that pneumonia sometimes prevails both as an endemic and epidemic disease. The endemic depending on causes peculiar to the district in which it prevails. Mr. Farr, in his tables of mortality, shows that the deaths from pneumonia are far more frequent in large cities and towns in England, than in the country districts

This [illegible] is true, and depends upon the great amount of noxious gases and deleterious matter floating in the atmosphere of the former and which do not contaminate the pure air of the country. Haemic attributed the epidemic form "to deleterious miasms in the atmosphere" and others "imputed it to swarms of insects in the air". When pneumonia occurs epidemically it is generally complicated with influenza and bronchitis and favored by atmospheric changes

Treatment of Pneumonia

In this age of intellectual development, when the light of science shines more vi-

idly than in former times upon the minds of scientific men, and when the who stand among the first of those who are termed men of science and inquiring minds, disagree as to the treatment of so important a disease as pneumonia, it is difficult to determine whose theory to endorse or whose plan to pursue. But judging from the dissimilarity of constitution and from the modification which age, sex and climate exercises upon the disease, in establishing its type I imagine we would not go very far astray were we to treat the symptoms of the disease on general principles or according to the circumstances of the case, and

not confine ourselves to the antiphlogistic plan on the one hand or to the stimulating plan on the other.

The treatment then of pneumonia varies according to the stage and symptoms. If it be sthenic in character, the indications are, 1st to moderate general excitement and subdue inflammation 2nd to promote absorption of effused fluids, 3rd to support the vital powers and obviate urgent symptoms.

The remedy for the first of these is, blood-letting. Venesection should be performed and blood allowed to flow from a large orifice, until the symptoms are modified. Until the

pulse becomes soft or until dyspnoea is relieved or until symptoms of syncope manifest themselves. The patient should be placed in a semi-recumbent position while the blood is flowing. In some cases the first bleeding fails to produce the desired effect — hence it becomes necessary to bleed a second time. Cupping glasses may be used over the affected part posteriorly better, as auxiliaries to the lancet, in cases where the symptoms are not so severe as to require the lancet, and where the patient is too weak to bear the loss of blood generally. Blood letting in the second stage generates no di-

reat influence, but in some cases it is required. The agents which rank next to blood-letting in efficacy are, Tartarized Antimony and Mercury. The former being most efficient in the stage of engorgement and the latter in the stage of hepatization. Antimony should be given immediately after bloodletting and in such doses as not to produce vomiting or purging. If however it does produce these effects, they may be prevented by a few drops of Laudanum to each dose or by combining with it Ipecacuanha. The Italian mode of exhibiting Antimony in very large doses from ten to one hundred and

twenty grains in twenty four hours, was undoubtedly erroneous, since more recent experimenters have found, that to secure its best effects, in pneumonia, is to give it in such doses as will act upon the inflammation itself and not depress the powers of the system, To produce these effects Dr Thomson Davis gives us the following plan, After the requisite bleeding he begins with one third of a grain of tartar Emetic in half a wine glassful of water, with a few drops of laudanum at the interval of an hour the dose is repeated, If the patient does not vomit he omits the opium,

but if he does, he continues it doubling the dose, giving two thirds of a grain of tartar Emetic for two successive hours and in this way goes on until he reaches two grains hourly. Under this plan, he says, the symptoms undergo a marked change for the better in three or four hours, but sometimes not for twenty four or thirty six. Calomel may be conjoined with Antimony to advantage in the first stage. A very excellent recipe is the following.

℞.

Tart. Emetic grs ij
Potassa Bi. Carb.
Gum Acaciae ā ā ʒij

Aqua Cinnam. ℥ss
Syr. Simplex ℥ss

Misce.

S. A tablespoonful every hour.
In this way it does not purge.
i.e. that may be prevented by adding a few drops of Laudanum
Opium is the best agent in the second stage. It should be given in small doses. A grain of Calomel every hour or two grains every two hours and so on combined with Opium until the gums are touched. Blue Mass may be given instead of the Calomel. if that agent prove to irritable for the bowels. or if its internal

use is in any way contra-indicated, then Mercurial ointment or Mercurial Liniment may be rubbed upon the skin and be thus absorbed into the system through that means. Large clysters at a later period should be applied to the chest. If applied too early they prove injurious by increasing the irritation. The bowels should be well evacuated at the onset and afterwards kept slightly open by mild aperients.

The treatment of pneumonia in children is similar to that of the adult, save that in very young children Antimony is not admissible. Blood-letting from the arm

when the patient is able enough
and will admit of it. If chronic
blood should be taken by means
of cups and leeches. The bowels if
torpid in the first stage should
be fully evacuated by a full dose
of Calomel. followed in a few
hours by a dose of Castor oil.
After the inflammation has subsi-
ded. Advantage may be derived
from small doses of Calomel with
half the Amount of ipecacuanha
and hyosciamus given two or three
times daily - If the Calomel purges.
Dover's powder. a grain or two
is a good adjuvant - Blisters
are of very great service in those

case., They should be applied after depletion and kept on a sufficient length of time to redden the skin, then taken off and a poultice applied.

The diet should be light, after convalescence is established and gentle exercise in the open air should be taken; but exposure to cold and damp carefully avoided.

In typhoid pneumonia or when it assumes an asthenic character, then the treatment is almost wholly different from that practiced in the sthenic form.

General blood-letting should never be resorted to. And although

cups and leeches are recommended in some cases by Prof. Watson and other Authors, yet it would be well perhaps to desist from their use in all such cases. The bowels should be evacuated in the commencement but purging should be guarded against. The use of diaphoretics are advisable, by acting upon the cutaneous secretions and thus eliminating morbid matter from the system, which may have some tendency to irritate the lungs. The best agents are the Carbonate and Acetate of Ammonia, Camphor, Nitrous ether &c. To these Dover's powder may be added. To promote the full

action of these fomentations may be used, - especially if the skin be dry. In combination with these remedies stimulants must be employed. They are very essential - Wine, brandy toddy, and tea, are among the most important. These should be given in smaller or larger quantities according as the circumstances of the case may require and at corresponding intervals. When the uterine system assumes an asthenic type, then the stimulating plan is also requisite. The patient should be watched carefully during convalescence and as she recovers strength, the stimulants should be withdrawn and tonics

substituted in their stead - in all
cases of whatever type, during
the period of convalescence the pa-
tient must be warned to guard
against the vicissitudes of the
season:

An

Inaugural Dissertation

on

Homoeopathy - as it is practiced.

submitted

to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland,

for

the degree of Doctor of Medicine,

by

J. Davis Thomson

of Maryland.

In cordial appreciation of the fidelity to duty which has marked his professional services, and with a sense of the advantages derived from them; in remembrance of many instances of courtesy and kindness, and as a tribute to the high moral sense of right, the sterling honesty of purpose and the purity of motive which distinguishes his character, this paper is respectfully inscribed to Professor Samuel Chew, by his friend and pupil —

I. Davis Thomson

Surely enough has been said and written, to convince all such as will examine themselves of true statements and fair reasoning, that the doctrines we taught by Hahnemann are fallacious, in the fullest conception of that term and that the claims of Homeopathy to the confidence of the public, are worse than none at all.

It is not proposed to give the readers of these pages, with a compilation of the tenets of Homeopathy — a full knowledge

which, may be obtained by reference to any medical Encyclopedia —; neither is it the object of this writing to enter upon a lengthy examination of the doctrines and principles of which Samuel Hahnemann was the great founder and advocate: these grounds have been repeatedly reviewed and made plain, by lucid writers and therefore, a summary glance at them will be all that is at present requisite.

The three fundamental principles upon which Homeopathy is based, are—

That like cures like:—

That infinitesimal doses are the most effectual and

That seven eighths of all chronic diseases are produced by Itch.

1st Then, they say this "like cures like" or, as they, prefer to express it, "Similia Similibus Curantur", which means, that diseases having certain symptoms are to be cured by medicines which at other times, and under other circumstances, would produce a similar set of symptoms. for instance:— if a certain medicine, given to a healthy, person,

will, produce symptoms similar to those of any particular disease, then that is the remedy and the only remedy which will cure that disease in a sick person: and, as an example of the truth of this principle, Hahnemann says, "Quinia will cure ague, because, when given to a healthy man it will produce symptoms similar to ague": this however is but an assertion and not a fact, as the experience of every practitioner of medicine must have proven to his satisfaction. How often is Quinia given as a prophylactic to those going into miliarious regions, and who ever heard of its, producing

chiles! We might with as much reason argue, that because iodine cures goitre and lemon juice scurvy, that the taking of these remedies will produce these troubles, which we know very well they will not do.

2ndly That these medicines are most effectual for good when administered in the smallest possible quantities.

This is a principle which they particularly insist upon and in consequence, we have their infinitesimal doses. I quote now from Hahnemann's celebrated "Organon" (page 289) on this point:- he says - "The very smallest, I repeat - for it holds good and

will continue to hold good, as a homoeopathic therapeutic maxim, not to be refuted by any experience in the world — that the best dose of the properly selected remedy, is always the very smallest one, in one of the high dynamisations, as well for chronic as for acute diseases", and again he says — without any reservation whatever, "The allopathic method never really cures the homoeopathic method never fails to cure" and that, "the minutest doses are always able to overcome the disease". Thus a single drop or grain, of perhaps some inert substance such

as charcoal for instance, and crude opium these is also frequently used by them) is to be rubbed up with the sugar of milk by repeated processes until it has been reduced to the millionth, the billionth or the decillionth part of its original strength and quantity, and then a minute portion of this is to be given at stated intervals, and is "always able to overcome the disease". Now one of these high dynamicisations — the one which is practically recommended — is the 30th dilution; this reduces a grain or drop of any substance to its decillionth part!

What is a decillion? — we can express it in figures, but the mind has no power to conceive of so vast a number, of even grains of sand or drops of water.

Most persons — even the non-medical portion of the world — as little as they know of the workings of medicines generally, know the effect of a dose of brandy — our most valuable diffusible stimulant — Well, if one drop of brandy, when carried — according to homœopathic rules and directions — through successive triturations and dilutions, until it were mingled with all the wa-

ters on the face of the earth. the mixture would not have reached its 12th dilution and yet, in order to reduce the drop or grain to its decillionth part, it would still have to be carried through 18 more dilutions — each time the quantity of water being multiplied by 100 — before it were reduced to its decillionth part — or its 30th dilution.

3rdly. We have that assertion in the homoeopathic belief, which is, if possible, still more ridiculous than the other two, and which attributes almost every disease — whether mental or physical — to [illegible] have

ever been liable, to a disease of
contagiously infecting inflammation
known as Psora or Itch. This is a
disease known to be produced by
the presence of a little insect
which burrows under the skin,
causing intense itching and
inflammation, and which, as
every medical practitioner is
aware, can beyond a doubt be
gotten rid of, in a few hours or
days, by the simple application
of sulphur ointment.

These testimonials certainly
bear upon their very face the
fallacy of their own assertions
and require no comments to ren-

der them still further ridiculous, which, in their ungarnished plain, nets they must, most palpably be, even to the most common understanding.

Such then, are the tenets of homoeopathy as laid down by their acknowledged leaders and as professedly endorsed by their practitioners.

Even admitting that Samuel Hahnemann himself — the founder of Homoeopathy — was an honest enthusiast, and that he conscientiously believed what he undertook to teach, the same amount of honesty can

by no means be granted to the hosts of those who have risen up as his followers; neither do we believe there could be found one man in ten thousand, among those who would inform themselves of the true dogmas and doctorines of the system, who could have the least faith in homoeopathy or in those who profess to follow its teachings.

For a fuller and clearer examination of the merits and demerits of homoeopathic principles we would refer the reader — among other works — to one by Doctor Simpson on the "Tenets and Tendencies of Homoeopathy", to Dr Bartlett's

"Philosophy of Medical Science" and to a published lecture by Doctor Wendell Holmes on "Homoeopathy and its kindred delusions".

So often have we heard the true science of medicine assailed by the pretentious advocates of homoeopathy, and such marvellous statements of the cures and successes of this false doctrine flaunted in our face, that we may be allowed to make mention of some of the unfair means to which the deciple of Hahnemann resorts, in order to obtain faith in his system and to serve his own

selfish and sordid purposes.
We shall therefore undertake an examination, not of the principles of homoeopathy, but of its practice.

Believing then, as we do, that homoeopathy is more than a mere delusion, regarding it as worse than a humbug, looking upon it as a gross imposition — a species of charlatanism which, even more than any other of the present day, trifles with, and sometimes sacrifices, the lives of our fellow creatures, we assume in regard to it, the following position: —

1st We claim, that the good which the homoeopathic practitioner may accomplish, is due, not to the infinitesimal doses of dynamized nothings which he may administer but —

A. To that most valuable, invisible in therapeutics known as Vis medicatrix Naturae, by which Nature so frequently works out her own cure and

B. To the strict rules of Regimen exercises &c, with which the homoeopath accompanies his administration of globules and which rules he is so careful to keep down and enforce.

2ndly That the great mass of those who seek homoeopathic aid, are more diseased in mind than in body, and that homoeopathy may be of service to such, not by any change which it has the power of working in their systems, but by acting — through faith — upon their diseased imaginations: — and

3rdly That under the garb of homoeopathy, the regular profession of medicine is oftentimes practiced and that the good resulting from the latter is claimed, and trumpeted to the world, as a success of the former.

In the long category of diseases and ills, which "human flesh is heir to", there are but few, - very few - which we can say positively it is within the power of medicine to heal.

The great principle of Vis Medicatrix Naturæ is well known - to all pathologists - to be the grand lever-power of "the healing art", and, were it not for the constant efforts of Nature, to cure herself, how utterly valueless and powerless would be our noble science of medicine!

In very many diseases, Nature, if left entirely to herself would eventually work out her own cure and

the limit of, even given to man, though a knowledge of the principles of therapeutics, is —

1st to prevent Nature from suffering her work or doing it too rapidly;

2ndly to assist her efforts if they be not sufficiently strong, and

3rdly, when Nature is working properly, to see that her efforts are not interfered with, by causing her to be let entirely alone; —

even the most learned and scientific of our professions claim to do no more than this.

Now these truths, although perfectly familiar to the medical world, are generally unknown

to the non-professional mass of mankind; most of whom, seek some visible - tangible cause for every effect which they experience. One of this kind being sick, sends perhaps for a homoeopath, who lets nature entirely alone, by giving the patient globules of some inert, harmless substance, or may be assists her efforts, only by regulating the patients diet: In course of time the sick man gets well and in his turn ignorance, is willing and eager to testify, that the diminutive globules, and they alone, cured

him of his disease: and the unprincipled practitioner, taking advantage of this credulity and ignorance, and willing to raise himself upon any eminence, however unsound and hollow, boastingly claims for himself and his system the cure, which he affirms was accomplished solely by his decillionth of a grain doses.

Now this principle of Vis Medicatrix Naturae, is as well known to the homoeopath as it is to the regular practitioner; and if he would but have the common honesty to acknowl

edge its power in the cure of his patient, it would be none of our business to criticise his treatment, but, the homoeopath calls every recovery which happens under his hands, a cure effected by his infinitesimal doses.

Hahnemann goes so far as to assert that - "no one has ever seen the simple efforts of Nature, effect the durable cure of a patient from any chronic disease."

The homoeopath not only coats his globule with sugar, but also delights to envelope it in a covering of mystery, and, by way of enforcing his dietetic

rules, impress upon his patients to take only such food as he shall name, "test" — as he tells them — the action of his medicine should be interfered with, and sometimes — if he happen to have a particularly delicate subject, — he states, that whilst under the influence of his medicine, the eating of pickles, sauce-meats or any other articles not named in his "bill of fare", will produce consequences, as alarmingly disastrous as he renders them awfully mysterious, and indeed, the little pill or powder, seeming so small a thing to

accomplish such promised good; the patient — naturally enough — seeks to aid their efforts, by rendering perfect obedience to any directions with which they are accompanied.

By these, and other means, the homoeopath is enabled to exact implicit observance of all his rules of regimen; — the value of which, as a means of cure must be known to every observer and acknowledged by every honest physician.

A young lady of our acquaintance, having unbounded faith, not in homoeopathy, for she knew

nothing of its principles, but in
"her Doctor", who was a homoeopath
acknowledged to me, that when
under treatment of a regular
practitioner — contrary to his di-
rections — she ate just what she
fancied, trusting entirely to the
"horrid dose of physic" which she
was taking, to make her well,
which object, under the circum-
stances, it is needless to say, they
did not effect; but asserted, that
more recently, and under ho-
moeopathic treatment, she took
but some tasteless little globules
on the tip of her tongue — eating
at the same time only such plain

food as was directed for her — and that the little powders had completely restored her to health, and then, as though to show the thing in its most ridiculous light, she added; — that one night, being at a company, and having, contrary to orders, eaten a spoonful of ice-cream, she became seriously alarmed at what she had done and hurried to the house of "her Doctor", who, with great feeling and kindness assured her that she had made a most narrow escape, but told her, that "just for this once", he would avert the terrible consequences

of her disobedience.

Let us take, as an example in point, a case of Dyspepsia: a disease, in which the appetite of the patient is exceedingly capricious, — sometimes almost entirely, at others morbidly great — the sick man craves some forbidden article of food, and, not having yet learned the importance of governing his appetite, he disregards the advice of his physician respecting diet, and gorges himself to repletion with some favored dish depending solely upon the medicine which his physician has prescribed, to cure him of the disease,

which disease has most probably been produced, by the very same course as that by which it is now continued. This piece of folly is indulged in again and again, and so things go on for months, the patient usually growing worse instead of better. Becoming restless under the disease, he seeks a change, instead of making it in his own habits, he calls in another physician, and then another and finally, for the sake of variety, or by way of experiment, he sends for a Homeopath. The disciples of Hahnemann come, with their infinitesimal

and philanthropic manner, and by assuming an intense interest in the case, asking numberless questions about the symptoms, and resorting to a thousand unprofessional tricks, he so gratifies the sick man - so ingratiates himself into the confidence of his patient that he has but to command, and be obeyed.

The homoeopath visits, moves to lay down - or he writes out, perhaps - a set of minute rules, under guise of "directions", according to which his medicine is to be taken, and which directions might read something like the following:-

"Rise in the morning, punctually
"at 6 o'clock, take one of my globules,
"wash, bathe and rub with a coarse
"towel — take one of my globules,
"walk half an hour in the open
"air — take one of my globules,
"eat your breakfast, consisting
"of broiled beef-steak — tender and
"rare, stale bread and black tea;
"do this in perfect quietness, when
"under no circumstances of any kind
"whatever — take one of my globules,
"after which repose in a comfortable
"position for half an hour then
"take one of my globules; ride
"slowly about a trotting horse for two
"hours, then take one of my globules";—

And thus the homoeopath lays down minute rules of regimen and exercise for the twenty four hours and this he does, under the pretext of telling his patient how and when to take his globules; impressing upon him at the same time, that unless he takes his medicine according to these rules, that it will be worse than useless for him to take it at all.

The sick man no longer having his tangible dose of physic on which to rely, and instinctively feeling, that the miniature doses which he is taking,

even when magnified by the power of faith, are too diminutive for the great task which it is asserted they will perform, gives himself up to their cunning, only by according to them every hygeian measure which they demand. By this time too, he is fully awake and to the danger of his condition and the importance of every sacrifice of appetite, for the sake of recovery, and he has learned at last, by painful experience - the necessity and value of a strict regimen. Under this course he improves, is thus encouraged to persevere in it and is finally cured. He now

goes forth to the world, a living - walk-
ing advertisement for homoeopathy;-
a tool, in the hands of the unprin-
cipled with which they magnify
their own importance and work
out their selfish ends:- a decoy fig-
ure, to decoy others into the net,
the assents, every whom, with ig-
norant, yet honest earnestness,
that he was cured by the infini-
tesimal doses of the Hahnemannic,
never once thinking to adduce to
the rigid rules of regimen and ex-
ercise which accompanied the glob-
ules, or knowing any thing
about the great principle of
the Medicating Nature.

Truly does man [illegible] to be humbuged! In fact the taste for it has grown to be part of his daily wants, and he will not be satisfied unless that taste be gratified: in the present day, as in times past, all worship at its shrine, all bow before its mysterious power.

It is as true as it is remarkable, that Honesty will lie neglected, and starve, whilst Charlatanism will grow rich and [illegible] upon the very fat of the land; and nowhere is this truth so plainly manifest, as in "the healing art".

There are few subjects about which men, as a body, are so deficient in knowledge, as that of the physiology of their own species, or, the action of medicines upon their own systems, and, as ignorance and superstition go hand in hand, no sooner does a man experience an effect without being able to understand clearly the cause producing it, than — as a general rule — he connects the two by an idea, into which superstition has entered as chief element, and he is now ready to embrace this new idea which has come along, no matter how far-fetched or ridicu-

lous it may be.

Throughout the history of the world we have had one succession of medical humbuggeries and delusions; no sooner does one vanish before the uprising of a little common sense, than another, equally false and, preposterous appears to take its place.

In turn, we have had Witchcraft, Astrology, Alchemy "The Royal Touch", "The Weapon Ointment," "The Sympathetic Powder", "The Far-water Cure" and a thousand others, down - through the day of "Perkins Metalic Tractors" - to the present times.

This long list of isms, follies and delusions, each having had their sucessful day of many advocates and hosts of believers — and each having in turn passed away — brings us down to the humbugs of the present time; prominent among these stands Homœopathy, and, following hard in the footsteps of the professed deciples of Hahnemann, comes Hobensack with his lime pills, — "the children cry for them" — the man whose "sands of life have nearly run out" and who, before he dies wishes to bestow a blessing upon mankind — which he

proposes to do on the reception of a few postage stamps — Baa-kee, with his quack cure-alls, and hosts of others whose names and advertisements fill our second class newspapers and serve many a poor Editor with material for filling his columns, which he, poor mortal, innocently calls "matter" little knowing how correctly he is naming the corruption or how filthy is its place of exudation.

It is an undisputed fact that homoeopathy finds its great field of action among the wealthy self indulgent portion of the

community, who have so far removed their love of self that the simple taking of a dose of disagreeable medicine is a sacrifice of inclination which they shrink from making, and they are more willing to pay — in tempting gold — to have some one tell them, with a show of plausibility, that minute sugar pills will serve them as well as the unpalatable dose of physic. To such, homoeopathy is a comfortable sort of belief — "a pleasant" — which, in trivial cases, may serve to satisfy the mind that something is being done,

that "a Doctor" has been called in and that the patient is receiving professional attention (which attention - by the way - it is one of the rules of the homoeopath to change well for on the principle - which Hahnemann understood human nature well enough to be aware of - that any thing which is well paid for is always more highly appreciated than that which we get cheaply or for nothing; and so, according to Dr. Schubert, one of Hahnemann's maxims was, - "the greater the sum changed for physic and Physician the greater the confidence placed in both.")

But this sort of 'Placebo' practice, while it may answer very well in cases really requiring no medicine, will not meet the emergency of an acute attack of some dangerous disease, calling for immediate and active treatment; it may hold its position so long as the patient only fancies himself sick, but when a man is truly ill, he wants the prompt adoption of measures more real, more earnest and decided than the taking, at stated intervals doses of medicine reduced to the billionth or decillionth part of a grain in quantity: even the

homoeopath himself, dare not, at such times depend upon his infinitesimals and high dynamisations and in proof of this assertion :- When the child of Heynel - who is a leading homoeopath of this city - was ill Heynel insisted upon Doctor Wegner - a regular M. D. - attending, he did so, and Heynel administered to the child - with his own hands - Dr Wegner's "poisonous, allopathic doses" and again ;- When McManus - another homoeopathic practitioner, was some time ago, seriously sick, he had Doctors Wright

and Bayley, of the regular profession, to attend him; he did not trust to his homoeopathic bethren with their 30th dilutions.

It is worth remarking, in this connexion, that these very practitioners, notwithstanding their want of faith in the system which they advocate, are still, professedly (!) practicing homoeopathy. An old quotation forces itself upon us:-

"The Devil was sick:
The Devil a Saint would be!
The Devil got well:
The devil a Saint was he!!"

A short time since, the child of

a [illegible] of ours, was given, by [illegible] a dose of poison: the servants, in great alarm, ran in various directions for help; the nearest practitioner of medicine was a homoeopath named Raburg; he arrived first at the bed side of the child and immediately gave it an [illegible] dose of ipecacuanha: the child's life was by this means saved; now suppose, that instead of the ipecacuanha he had administered the decillionth of a grain, of that homoeopathic medicine, which is named in their materia medica, as the

one which in a healthy person would produce symptoms most like those from which the child was suffering, can any one think the child would now be living! No, Homoeopathy, like atheism, may answer to talk of whilst in life and health but when Death approaches, we want some safer dependance – some surer foundation on which to rely.

Among those who have no regular employment – no rational occupation for the mind, there exists a desire for something with which to fill up this vacuity and so, we find in –

desire, or longing for novelty — an insatiable desire for something new: now homoeopathy, with its decencies and ceremonious mysteries, is eminently calculated to gratify this taste and so finds very many followers among this class.

And again, the system of homoeopathy is particularly suitable to persons of [illegible] (for men who ought to be classed in the same category) who, because they have little else to do, imagine themselves always "ailing", and that they must even be taking medicine, for

some fancied trouble: This class of people are in the constant habit of drenching themselves with every patent medicine they hear of, and to such, some thing — if really practiced — may be of undoubted value, by stopping the pernicious use of these quack "panaceas" and giving instead — in the shape of harmless little globules — just what the individual truly requires — no medicine at all. This portion of the community, at their frequent tea drinkings, talk much of their imaginary diseases and "wonderful cures" and it is from

such, that homoeopathy acquires its greatest notoriety,— a notoriety not even surpassed by the numerous self-vaunting publications with which it delights to flood the country.

Having taken a view of the grounds upon which the structure of homoeopathy is being reared,— having seen the foundation upon which it is based,— having glanced at the principles by which it is laid off and regulated and having considered the material which is used in the erection of this structure, we come now-

to speak of the fact that its builders employ honest, hard-working laborers and then cheat them of their dues, by claiming to have done all the work themselves.

Surely every man has a right to administer medicine, to those who employ him, in such quantities and in such a manner as seems to him best, and we quarrel with no man for pursuing that course of practice which he honestly believes to be correct, however widely his views upon the subject may differ from our own, but, when a man advertises himself as a homoeopath,

and thereby professes to be a follower of Hahnemann, is it not reasonable to suppose that he will adhere to the tenets so laid down by the founder of that system! and, that he will practice on the principle *Similia Similibus Curantur*, — that he will give some but infinitesimal doses and that he believes some eight or nine chronic diseases and a large number of acute ones to be produced by itch! Yet what proof have we that the so called homoeopath regulates his practice by any such rules? none whatever! — on the contrary, evidence is con-

[illegible] finding its way to light that while pretending to give his millionth or decillionth of a grain, he frequently gives good honest doses, purloined from the pharmacopoea of the true science of medicine.

When a candidate for the title of "Homoeopathist" determines to use that word as a bait to catch the gullable, he studies the regular profession and takes a diploma — not from a homoeopathic school but — from some respectable medical college: Why does he do this when there are colleges which teach

the system he has adopted?—

1st Because, as a regular M. D. he takes a position of respectability before the world which he could never attain as a simple, homoeopathic charlatan and

2ndly That he may be thoroughly acquainted with our materia medica and that he may avail himself of the value of its remedies. After this he sets the net of Homoeopathy with which to draw in the unwary and confiding.

We have instances of this kind constantly before us; one day receiving a diploma from what they are pleased to term.

an "Allopathic" college and the very next — presto, change — they are prepared (!) to practice homoeopathy, a knowledge of which science must come to them by magic or inspiration — in a single night.

Medicines can now be rendered so pure and in such concentrated form that a very minute quantity may be a very full dose. How simple a matter is it then, for the homoeopath to make his little pill or powder contain the most invisible doses of Morphia, Strychnia, Elaterin, Nicotine, & Conitina

Atropin &c., which are the active principles of some of our most valuable medicines, and yet his globules or powders may remain of the same diminutive size as those containing but the billionth of a grain of some inert substance.

There are numerous instances of the kind on record, in which the little globule administered as an infinitesimal dose has contained the most powerfully concentrated medicines, in a quantity which the regular practitioner would not dare to give.

Dr. Alfred Taylor - the celebrated -

chemist and toxicologist of Guy's hospital, found one third of a grain of Morphia in a powder, recently bought, and a few years ago – also in London – the Duke de Camizzano being slightly indisposed, was advised by a homoeopath, to take his little globules; thinking to save trouble – as he had often done before, perhaps and with perfect impunity – the Duke took three doses at once; he died in two hours! and upon analysis the globules were found to have contained large doses of strychnia.

I see, then, we find them

consistency in the observance of their faith in this one particular — the only one of the three in which we have the least opportunity of comparing their practice with their teachings — with how much greater reason may we judge them to be also false to those articles of their faith into which we have no means of instituting an inquiry. If a chance investigation into the accidents of poisoning goes behind the secrecy and mystery with which the homoeopath surrounds his medicines, and brings every day, to our view, a knowledge of cases like the fore-

going, with what certainty may we know, that the disciple of Hahnemann but uses homoeopathy as a cloak, under cover of which, to practice whatever system best ministers to his own selfish and sordid purposes.

When a man endorses the doctrines of Hahnemann by offering his services to the public as a homoeopathic practitioner, and is employed as such, his patients certainly have a right to suppose that they are taking doses containing but the millionth or the decillionth part of a grain, and if this be not the case,

then they are being grossly imposed upon. Now since we know that the homoeopath does smuggle real doses of medicine into the system of his patients under pretense of infinitesimal doses, and that he claims the success of this treatment as a success for homoeopathy, it surely cannot be considered uncharitable if we say, that such a man is sailing under false colors and that he has no claims whatever to the confidence and respect of the community.

The vail behind which Hahnemann and his followers

have been standing for fifty years. Has at last grown so timid and timorous, that many of those who, profess homoeopathy, are beginning to be ashamed of the position which they have so boldly taken before the thinking portion of the public, and try to make some show of honesty by saying, that they are willing to practice, either homoeopathy or "allopathy", which ever the patient himself may prefer. How plainly does this show that the homoeopathist has no faith in the principles which he professes! and instead of showing his honesty, how, clearly does it

wrong, just the reverse; for if he believes one course to be right, then he must know the other course to be wrong: and yet, in the same breath, he will resume the two systems — which are just the reverse of each other, and which Hahnemann himself declares, to use his very words, "are as different as day and night" — and he will tell the sick man to choose, or leave it, by which of the two he will be treated. Now, if the homœopath, who thus offers to practice either system, does not believe the one, of which he is a professed advocate, to be the

true one, then he uses the title of "Homoeopath" dishonestly: and if, on the contrary, he conscientiously believes homoeopathy to be the true system, then he suffers himself — for the sake of gain — to depart from that course which, according to his own judgment, is right, and to practice that which he, conscientiously believes to be wrong.

These semi-homoeopathists are acknowledged, even by themselves, to exist in great numbers and they are denounced, by their own writers in strong language. "That," says Jahr — who is a leader

in their ranks, and a man who stands next to Hahnemann as an advocate of their doctrines— "What should we think of that class of practitioners who, from ignorance — for their personal convenience or through charlatanism, treat their patients one day homoeopathically and the next day allopathically!" No, the physicians who will either secretly or openly, avail themselves of the therapeutics and medicine and medica of the new science of medicine, surely has no just claim to the title of "Homoeopathist".

We have thus endeavoured a faithful portrayal of Homœopathy as it is practiced in our midst, and, in offering some explanation of the causes of its success, we have attempted to show that it possesses no claims whatever to confidence or respect.

Love of novelty and the element of credulity, may continue to sustain this vile imposition, and keep it afloat for a time, but the appearance on the medical horizon of some new ism, or the awakening of common

reason must arouse a spirit of inquiry in the minds of its victims, and sooner or later, Homœopathy, with its professed practitioners, must sink to their proper resting place, by the side of other defunct and forgotten delusions.

Baltimore Infirmary
December 26. 1860

An Inaugural Dissertation

ON

Typhoid-Fever

Submitted to the

Examination of Provost, Regents & Faculty

of Physic of the

"University of Maryland"

for the Degree of

"Doctor of Medicine"

By

Charles Spath

N. Carolina.

Typhoid Fever the disease of which I will now attempt to write, is known by many different names viz common continued, enteric, typhus mitior, nervous, abdominal typhus, mucous, enteric mesenteric, follicular enteritis, dotic enteritis &c., I have adopted the term typhoid, because it seems to be coming into general use. Typhoid is derived from two, greek words Τυφος, typhos, and Ειδος resembling, because of its similarity to typhus.

The character, symptoms, lesions and causes, of typhoid fever were first fully and carefully studied by the physicians of Europe. The first pathological description at all complete, was contained in the work of Prost, published in 1804. But it is to the great work Louis, that we are indebted for the first complete and comprehensive description of typhoid fever. The most distinguished writers on this disease in this country were Drs Nathan Smith, James Jackson, E. Hale and W. W. Gerhard.

Mode of Access. — There is much difference in different cases of typhoid fever as regards the suddenness or closeness of the attack. There is no other acute disease perhaps in which the attack is more frequently slow and gradual than in this, it is very often impossible for the patient, to say on what day it commenced or in what his sickness consisted, he may have merely felt a sensation of mental and bodily languor, or he may have had slight and dull pain in the head back and limbs, with a general feeling of fatigue.

At the same time he may have experienced a sensation of chillings, alternating with heat. There may have been also, loss of appetite, moderate thirst, with a dry and clammy state of the mouth, the countenance becomes dull and listless, the eye loses its animation, and the mind is either apprehensive or indifferent.

There may have been some pain in the abdomen with moderate diarrhea. This obscure and indifinite condition

of ill health may continue from one to two or three weeks with but slight changes from day to day, or it may increase gradualy in the severity of these symptoms with a gradual appearance of other and more characteristic symptoms, until they constitute a succession and complete developement of the strongly marked phenomena of the disease

Out of the 20 cases that have been brought into the Baltimore Infirmary since last march in 18, the disease has been gradual and slow in its approaches. But whether the attack be slow, insidious, creeping, and obscure, marked by no prominent symptoms, or on the other hand sudden and violent, the disease goes on for a considerable portion of time only varying according to its severity and favorable or unfavorable termination, and during which progress, many symptoms, peculiar to and characteristic of the disease, appear

and disappear; these several symptoms, classified, and arranged; I will next proceed to explain.

Chills.— Chills or rigors are present in a large majority of cases at the commencement or early in the disease. They are the most constant attendants upon the formal access of the fever, and occur most frequently during the course of the day; and may be repeated more or less frequently during the early part of the disease.

Heat and State of Skin. Increased heat of skin almost always follows the chills or rigors, which varies much in different respects. In a majority of cases it is quite moderate in degree, and equally diffused over the body, while the morbid heat is high and burning frequently very unequally distributed in others. The head, and trunk, will sometimes, be excessively hot, while the extremities are unnaturally cold; at others the extremities are hot when the body is cool.

The skin is dry in a small number of the severe cases, during the whole course of the disease, while in other cases there is more or less moisture throughout the disease, sometimes the sweats are profuse, and may be confined to different portions of the body they may or may not possess a strong acid odor, they not unfrequently continue during convalescence, preventing the reestablishing of health and strength, resisting the influence of aromatics and bitters. Dr Nathan Smith speaks of the washerwoman sweat, which is extremely profuse and extends over the whole surface of the body giving the skin the corrugated appearance of a washerwomans hands, he never saw an instance of recovery after this kind of sweat.

Pulse. If there be any one condition of the pulse more characteristic of the disease than another, it is that of frequency, smallness, and want of strength. if this is not the condition from the outset, there is a general tendency to it, during the progress of the disease. The pulse ranges from 70 to 140 in this disease, but has been known to go much below the natural standard.

I have never known it to go above 128 beats in any case, treated in the Infirmary. it may go as high as 160 pr minute

Thoracic Symptoms.

Respiration. The febrile excitement is usualy followed by accelerated respiration, which in the higher grades of the fever, often terminates in delirium or Stupor, the respiration then, becomes irregular, noisy, and hissing. Dr Flint speaks of a spasmodic inspiration which is not dependant on disease of the lungs. and which he regards as a forerunner of Coma

Cough. Typhoid Fever is most always attended by a slight cough, which commences generally between the 4th and 16th day of the disease, the sputta are small Colorless. and may be bloody by the blood from the nares, or rusty from complication of Pneumonitis.

Physical Signs. Dry sonorous or sibilant ronchus, is the most constant physical sign, and occurs early in the disease. near the close of case about to terminate

fatally, there often a circumscribed capillitous ronchus, with the physical signs of local secondary pneumonitis, sometimes there is mucous ronchus, instead of dry sonorous or sibilant: over the depending portion of the chest there is dullness on percussion in many of the grave and fatal cases.

Nervous Symptoms.

Under the head of nervous symptoms I will endevour to describe an extensive group of phenomena, and which will serve to distinguish Typhoid Fever, in a very considerable degree from nearly all other forms of disease.

Pain in the Head. This is a common symptom of Typhoid Fever, it is rarely absent it is as common in mild as in severe cases. and is one of the earliest symptoms. Its most common duration is from 7 to 12 days but it is generally continuous throughout the disease.

The state of the Mind. One of the first and most common symptoms is mental languor or inability. Very often the

patient is irritable and impatient; but more frequently listless and indifferent or timid and apprehensive of the danger of his disease. He is forgetful and finds it difficult to answer questions. This condition may continue in mild cases throughout the entire course of the fever, or it may pass into Stupor and delirium.

Delirium is common in Typhoid Fever, and may be present from the commencement of the disease. and its subsidence or diminution constitutes one of the surest signs of returning health. in many cases it is present only during night, or in febrile paroxysms the delirium is wild and violent in severe cases, especialy such as are rapid in their march. there is crying and screaming. The restoration of the mind to its healthy condition is more or less gradual but nearly always complete. There was a remarkable case in the Infirmary, last June. the patients name was John Shane. he was sick nine weeks, one of his first symptoms was stupor; the dilirium appeared on the third (3d) day on the 4th day it was violent

on the 5th day it was very wild and violent, this continued for five (5) weeks, when it abated for a short time, the next day the patient was again delirious and continued so for four days, when his reason was restored in some degree. he gradually improved and got perfectly well.

Physiognomy. The expression of the countenance is generally dull and listless; and strongly expresses the state of the mind.

State of the Senses. The most common changes are dizzings; dullings of hearing; and ringing in the ears, the dizziness is often one of the precursory symptoms. The hearing is often impaired from the commencement of the attack.

Ringing, or buzzing sounds in the ear occur most frequently in severe cases and generally begin at the early or middle period of the disease. When there is active febrile excitement, there is often increased sensibility to light.

State of the Muscles. Subsultus [illegible]

is very often present in the cases treated in the Infirmary since last march out of 20 cases 15 had subsultus tendinum. and all of the cases that have as yet come under my observation have had irritability of the muscles. Sometimes the muscles of the diaphragm become affected occasioning hiccough.

Digestive and Abdominal Symptoms

These symptoms are of much importance, as they often form as one of our surest means of distinguishing Typhoid from Typhus Fever.

Appetite and Thirst. There is little if any appetite throughout the whole course of the disease, the return of the appetite is a sign of returning health. The Thirst is generally proportionate to the degree of febrile excitement

State of the Tongue and Mouth. In some cases there is little or no change in the appearance of the tongue in others the tongue is covered with a light yellowish coat sometimes the tongue, after having been covered with a

moist white, or yellowish fur, gradually becomes dry and brown along its middle, and red at its tip and edges - in other cases, or later in these, it becomes dark glazed and cracked, sometimes it peels off leaving the tongue, naked, red, and shining.

Very often there is much difficulty in protruding the tongue - it being protruded with a tremulous motion.

The mouth, is often dry, lips cracked and the teeth are covered with sordes.

Nausea and Vomiting. These symptoms are of frequent occurrence in typhoid fever. Nausea sometimes occurring at commencement of the disease, with vomiting, more frequently occurs at a latter period, and is generally accompanied with pain in the epigastrium.

Diarrhœa. Is one of the most frequent and common symptoms and often takes place in connection with other phenomena, it is one of the most characteristic symptoms of typhoid fever. This symptom varies

much in regard to its commencement, duration, and degree. In some cases the diarhea begins and ends with the disease, in other cases it commences in the middle, or latter stages. In grave cases the discharges are sometimes without the consciousness of the patient. The stools are generally of a yellowish color, in some cases they are of a dark color, or are mixed with blood. an in few cases free and repeated hemorrhage, takes place from the bowels.

Pain in the Abdomen and Tympanites. Typhoid fever is in most cases accompanied by pain in the abdomen which may sometimes only be elicited by pressure. This symptom in some cases constitutes the principle source of suffering during the whole course of the disease.

Flatulent distension of the abdomen is common, and to some extent, characteristic of this disease, its degree and frequency are like most of the abdominal symptoms; proportionate to the gravity of the disease, it is most com-

"men in the first or second week. Gurgling, is a common symp-
"tom, produced by pressure on the abdomen, in the region over
the cæcum

Miscellaneous Symptoms

Under this head I will describe a number of morbid phenomena more or less characteristic of typhoid fever, which in any other manner would have been difficult to group.

State of the Urine. In the commencement of the fever the urine is not high colored, but becomes so as the disease advances, when it lets fall an abundant sediment. In some cases the patient allows his bladder to become distended without attempting, or perhaps, being unable to evacuate it.

Epistaxis. Bleeding from the nose is a very common symptom, and, may occur at different stages of the disease. But generally occurs during the early

...ed. Cutaneous Eruptions. The most frequent eruption upon the skin, consists, of a small spot; not a pimple, slightly elevated above the surrounding skin not always sensible to the touch but generally so. it is about as large in circumference as the head of a pin, and is of a bright red or rose color; it is called Rose Spot; and it is so common in typhoid fever and so rare in other diseases, that it has received the name, Typhoid Eruption. it disappears for a moment on pressure. They are most frequently found upon the abdomen or chest. They may be seen in the latter part of the first, but most commonly make their appearance during the secon week; and remain most frequently about. Another very common eruption is called, Sudamina, they are formed by a limpid fluid elevating the cuticle; they are found most frequently upon the neck and shoulder, and seldom appear before the tenth (10th) or eleventh (11th) day.

I have now completed the enumeration of the symptoms of typhoid fever as succinctly as my time from other studies would admit. Some of these symptoms are of more frequent and are of more importance than others. Some are valuable as diagnostic, others as prognostic signs. They are seldom all united in any one case.

I will now proceed to enumerate and describe the anatomical lesions of the disease, and the relation between them and the symptoms.

Lesions

Heart and Aorta. In some cases of typhoid fever the heart is soft and flappy after death its color is often changed from the red, to a pale color, and the walls of the ventricles, are in most cases diminished in thickness, there is frequently a reddening of the internal surface of the aorta, caused by the imbibition of the blood into the tissues; this imbibition depending upon a peculiar condition of the blood, and of the tissues.

Want of the Blood. There commonly is diminution of the natural proportion of fibrin in the blood. The cavities of the heart often contain yellowish or whitish concretions of fibrin; but more commonly the blood is dark, fluid, or coagula; this state of the blood may be found in all the eruptive fevers.

Of the Lungs. Splenization or carnification of the lungs is of frequent occurence. This ~~Lesion~~ may occupies, the circumscribed portion of the inner lobe of both lungs; this lesion is not indicated by any peculiar symptom during life.

Epiglottis. Is frequently the seat of ulcerations which sometimes extend through the investing membrane into the fibro cartilage; causing extensive destruction of that organ

Brain. Lesions of the brain, are uncommon and there are no peculiar of Typhoid fever.

Lesions of the Digestive and Abdominal Organs.

Pharynx and Oesophagus. Ulceration of these organs may be strongly suspected, when there has been pain and difficulty of deglutition

Stomach. The lesions of this organ consist in the change of color, of its mucous membran. in its consistence, in its mamellonation, and ulceration, these changes may exist altogether or singly. Some of these lesions are apt to occur when there has been gastric distress, during the latter stages of the disease.

Small Intestine In all cases of typhoid fever there are lesions of the small intestine.

The duodenum is occasionally the seat of small ulcerations. In a few cases the small intestines are destended with fecal matter, if there has been hemorrhage from the bowels. you will find in them, a quantity of dark colored grumous or coagulated blood.

The mucous membrane of the intestines is very often the seat of sanguineous infiltration for several inches, or feet of its length, or it may be continuous throughout its whole extent.

The color of the infiltrated membrane is from red to dark red, and has a peculiar trembling appearance, somewhat like jelly. The ulceration of the elliptical plates or Peyers glands differs somewhat in different cases. This lesion is present in all cases of typhoid fever

In a few cases which terminate early the elliptical plates may be more or less increased in thickness with the subjacent cellular tissue; and redness with softening

Towards the latter part of the disease the glands become more enlarged; and may be elevated from one (1) to three (3) lines above the surrounding mucous membrane, the largest as from one, to two inches long, and from one half to one inch or more broad. Their edges are in general clearly defined, smooth and regular, but sometimes irregular and ragged.

Some of them are dark red, some pale, and others of an intermediate hue. Lieb describes two varieties, the hard, and the soft. The former are found to contain beneath the the mucous membrane and resting upon the muscular coat, a layer of white or yellowish, firm brittle matter, the free surface of which is smooth and shining. The latter are softer, less elevated, and destitute of the whitish layer, above mentioned.

The patches vary in number from one, to thirty; but average from five to eight. they appear upon the surface of the intestine opposite the mesentary. They generally come on successively, those near the Ileo caecal valve appearing first; and afterwards those higher up, even into the jejunum. Those highest in the intestine are the last developed.

The hard patches may or may not ulcerate. The soft patches always ulcerate. When these ulcerations occur they may vary much in size and number, they are generally most extensive near the Ileo Caecal valve, sometimes entirely destroying the plates

The ulcers sometimes perforate into the cavity of the peritoneum. The ulcers usually have a tendency to heal; when they perforate they generally do so in the latter stage of the disease. This accident occurs most frequently in the mild cases.

— Large Intestine. The alterations of the large intestine consist of flatus and ulcerations. The flatus is found in a large majority of cases. The distension is sometimes so great as to displace the stomach liver, and diaphragm. The ulcerations are generally numerous and superficial most frequently occupying the cæcum This lesion is most common in cases terminating late

Lymphatic Glands. These glands always undergo some change; before the third week they are increased in volume, diminished in consistence and of a red color; after that period they are more nearly natural.

Spleen. The spleen is in almost all cases more or less altered, being generally enlarged and softened.

In some instances it is four or five times its natural size, and softened to the condition of a bloody pulp.

General Remarks. The lesions of typhoid fever are numerous and profound. There are perhaps few diseases, if any, of an acute character in which the variety, extent of symptoms, and pathology, constitute such a prominent and striking feature as in this. Some of the lesions which I have mentioned are more or less accidental. Many are of frequent occurrence. While others are essential to the disease, and always enter into its composition. The alteration of the Elliptical plates, of the small intestine, and the lymphatic glands, of the mesentery, may be mentioned as an example. The real and relative importance and the order of succession in which these several lesions occur. I will not now attempt to describe. As to the relation which exists between one or many of these appreciable lesions and the disease, is a question, which has not as yet been satisfactorily settled

But that these lesions are the result, and not the cause, of the

disease; as some appear to think, I think is undeniable.

Causes of Typhoid Fever

Cause. Nothing precisely is known of the nature and essence of the actual producing efficient cause of typhoid fever. There are only two causes the influence of which can at all positively and accurately ascertained. Viz, Recent residence in a given place, and Contagion.

Locality. We have reason to believe that the geographical limits of typhoid fever are wider than those of any other strictly Idiopathic, non eruptive fever. It is quite common in all the states of the union, it is quite a common disease in France, Germany, and other parts of Europe. The disease is often generated in places where a large number of human beings are crowded together in a confined and vitiated atmosphere. More certainly, if they have also

to subsist on scanty, and unwholesome food, it is the you often met with in large cities, prisons, camps, and ships. Young persons coming from the country to cities to reside are frequently attacked by the disease. But the disease also originates in the pure air of the country. The disease often springs up in isolated cases. This fact is brought up by some, to prove that it is not contagious; but other equally good authorities say that is it undoubtedly contagious.

Age. Certain persons are more predisposed to typhoid fever, than others. Young persons are more apt to be affected than old ones. It is seldom seen after forty (40) years and is most common between the Nineteenth (19th) and Twentyfourth (24th) year.

Season. Dr Nathan Smith says that he has seen typhoid fever not only in every month, but in every day of the year. But the disease does occur more frequently in one season of the year than in another. in the [illegible]

grand estate it has received the name of autumnal fever, because it is more common in autumn.

Epidemic Influences. Typhoid fever is met with in the sporadic and epidemic form it sometimes prevails in circumscribed neighborhoods; or it may prevail over a large extent of country so generally and extensively as to assume an epidemic character.

March and Complication

Typhoid fever rarely terminates under the thirteenth day from the commencement of the disease, and rarely extends beyond the sixtieth day. The march of the disease is uniform and regular, it is seldom marked by great and sudden changes, either favorable or unfavorable, though these do sometimes occur, neither is it marked by distinct stages. Typhoid fever is occasionally complicated with other diseases; Dr Nathan Smith has often seen it follow

dysentery and coexist with epidemic catarrh, several of the cases in the Baltimore Infirmary when accompanied by severe bronchitis. Sometimes erysipelas occurs in the course of the disease. Acute peritonitis sometimes occurs from the discharge of the contents of small intestine into the cavity of the peritoneum through some perforation; this accident generally occurs in cases of moderate severity.

Relapses. True relapses sometimes occur. I have met with one case in the Baltimore Infirmary, where the patient after complete convalescence lasting six days was again taken with the same symptoms as accompanied his first attack; constituting not the supervention of a new accidental affection, but a genuine relapse.

Sequelae. Phthisis not unfrequently follows an attack of typhoid fever. Dr Jackson, noticed a peculiar lame-ness with pain in one, or both legs, continuing for several weeks after

convalescence.

Prognosis

Typhoid fever though a serious, is not a very fatal disease. It is one of those diseases which put on different degrees of violence under different circumstances in some years or seasons it is much more fatal than at others.

No case of typhoid fever can be looked upon as free from danger and on the other hand, there is no condition so low, no symptom so fatal that death should be considered inevitable, this fact I have been exemplified on several occasions in the Baltimore Infirmary where several patients apparently moribund recovered under scientific and skilful treatment, they were typical cases of typhoid fever.

Among the most unfavorable symptoms are steady and complete delirium, deep Coma, restless picking at the bed clothes, Stertorous breathing, excessive subsultus or epileptic spasms, regidity of the limbs and eglids, hemorrhage

[illegible] bowels, great prostration, involuntary discharges,
[illegible] and [illegible] of the [illegible] and [illegible]
[illegible] [illegible] [illegible] [illegible] and [illegible] the
[illegible] of these symptoms [illegible] [illegible] by
[illegible].

[illegible] [illegible] [illegible] diminished [illegible]
[illegible], diminished heat of Skin, increased consciousness
[illegible], inability [illegible] objects, [illegible],
[illegible] and disposition of the tongue, to become moist, and clean.

Thirteenth.

[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] and [illegible].

[illegible] [illegible], [illegible]; [illegible]
either immediately followed by headache, and pains in the
back and [illegible]; [illegible] [illegible]
[illegible] of a few days; thirst, heat of the skin; loss of

[illegible]; muscular debility; dullness and confusion of the intellect, [illegible] gradually into delirium; vigilance, restlessness; [illegible] of the muscles, or picking at imaginary objects; ringing or [illegible]; [illegible]; [illegible]

[illegible] colored eruption; during the second week; a dry, glutinous, [illegible], red, brown, tongue, prutruded with difficulty, [illegible]; diarrhoea, the stools thin and watery, [illegible] consisting of blood; tympanitic distension of [illegible]; [illegible] in the right iliac region, [illegible] [illegible] over the chest; these [illegible] [illegible] obvious cause, occuring usually in a person under forty years of age; more or less regularly developed; [illegible] in severity and terminating in death at an indefinite period after the ninth day; or gradualy subsiding or disappearing one after an other and giving way [illegible] at an indefinite period after the fifteenth or [illegible] day, mark most clearly the disease of which

[illegible] been speaking, typhoid fever.

It is therefore, with all the above mentioned symptoms [illegible] as impossible to mistake typhoid fever for any other disease; some of the most characteristic symptoms may be wanting; and [illegible] the diagnosis [illegible] in no way difficult or doubtful. The most important [illegible] symptoms may be absent, such as twitching of the muscles; morbid watchfulness or drowsiness, and there may be no aberration of the mind; but if the other symptoms, [illegible] are present, there need be no doubt as to the character of the disease. In other cases, the abdominal symptoms, may be absent, without throwing any doubt upon the diagnosis. We may go still further, we may suppose that a person between the age of fifteen and thirty is, without any appreciable cause attacked, by the [illegible] symptoms already described, attended or followed by loss of appetite, sufficient prostration of muscular strength to confine him to bed

occasional [illegible], [illegible] or [illegible] in the [illegible], and that these symptoms cannot be referred to any [illegible] disturbance, with but little [illegible] or as many as twelve or fifteen days; even under these circumstances there can be but little doubt as to the disease.

In most cases we will find at least as many elements of diagnosis as in the one just supposed; in many, there will be more.

Sometimes the disease is so nearly latent or so poorly defined, as to be overlooked, or mistaken for some other disease, but with ordinary [illegible] of its [illegible], its symptoms, and their marks, this will seldom be the case; at other times many of the most important symptoms may have disappeared, and no satisfactory history of its anterior progress can be obtained, under these circumstances the disease has been mistaken for other diseases.

The diseases with which typhoid fever may be confounded

are, typhus, bilious remittent, inflammation of the membranes of the brain, dysentery, and the different forms of tuberculosis; but, with attention directed to the subject, and a recollection of the more characteristic symptoms of typhoid fever, and the diseases for which it may under different circumstances be mistaken, there can in general, be no great uncertainty in the diagnosis after a due period of observation.

Treatment.— This should usually be commenced by some mild purgative, such as sulphate of magnesia, or of castor oil, so as to thoroughly evacuate the bowels and remove all irritating substances, taking care that the bowels are not moved too much, as in typhoid fever there is an unusual susceptibility to the action of cathartic medicines. If the evacuations are free from the commencement no opening medicines will be

required. The state of the bowels should be attended to throughout the disease; if there is much diarrhœa give chalk mixture with tinct of Opii, and catechu, but see that the bowels do not become constipated.

When the pulse is full and strong, threatening congestion or inflammation of some important organ, general bloodletting may be resorted to, but this remedy can in most cases be dispensed with, and in some cases would be absolutely injurious, and it will be seldom if ever proper to employ it after the first week, though local bleeding may be resorted to at any period of the disease, and sometimes with much advantage.

Refrigerant diaphoretics may be found useful throughout the whole course of the disease. When nervous symptoms make their appearance tinct of valerian, spirit of nitric æther, camphor, &c, may be found useful. Sponging the body with cold water is a very useful remedy if it

does not chill the patient, and if the patient is very feeble, dilute spirit may be substituted. Cool drinks are very grateful and should be given if the patient is not too prostrate. Applications of cold water, or ice, to the head will sometimes afford much relief in headache and delirium. If there is much abdominal tenderness leeches or cups may be applied, followed by warm fomentations or emollient cataplasms. In obstinate tenderness a blister may be of service. If there is so much diarrhœa as to exhaust the patient, it should be checked by chalk mixture, or mucilage of slippery elm water, and tinct of opii, &c.,

The above measures combined with proper diet, cleanliness, quiet, and a proper modification of the diet, will generally conduct the patient through the milder forms of the disease.

Should the fever be attended with debility, tonics, cordials, or stimulants, according to the degree of prostration should be given. Among these the most importa

nt are, tea, wine whey, milk punch, with the use of quinine, wine, brandy, &c.,) as the exigencies of the case may demand. The effects of these remedies should be carefully watched; and if they produce febrile heat, and restlessness, pain in the head, or any other obvious local disturbance, their use must be suspended or modified; when there is an urgent necessity for immediate stimulation, ether may be used.

Should the tongue become dry, with abdominal distension, the oil of turpentine, may be given with much advantage as recommended in doses, of ten drops every two hours, by Dr George B Wood, there is generally a marked improvement in the course of twenty four hours.

When coldness of the skin is connected with debility, powerful rubefacients may be used in connection with the internal use of stimulants, the temperature of the surface should also be kept up by hot cloths or bottles of hot water, &c.,

Hemorrhage from the bowels should be arrested by the acetate of lead, kino, or extract of rhatany, with opium.

In cases of peritonitis from perforation of the intestine, large doses of opium should be administered; in connection with perfect rest and the avoidance of all substances internally which could in any way disturb the bowels, blisters should also be applied over the abdomen.

The formation of ulcers should be guarded against by avoiding constant pressure on those points where they are most liable to occur, and when once formed should be protected from irritation, and properly dressed.

The state of the bladder should always be attended to and if there be retention of urine, it must be drawn off with a catheter.

The diet should be carefully attended to in typhoid fever. In the early stages it should be light, consisting chiefly of fluid substances, such as barley water, rice

water, solution of tapioca, sago, or arrowroot, very weak gruels, &c., When symptoms of debility show themselves a more nutritious diet will be required.

The greatest attention should be paid to cleanliness and ventilation, throughout the whol disease.

The convalescence should be closely watched as any imprudence in diet, or otherwise may bring on a relapse, or prove otherwise injurious. The bowels should be kept open by an enema. The profuse and exhausting sweats, may be treated by the mineral acids, and simple bitters.

An
Inaugural Dissertation
on
Oxygen,
Submitted to the Examination
of the
Provost, Regents, and Faculty
of Physic, of the
University of Maryland,
for the Degree
of
Doctor of Medicine,
by
W. H. Benson

Oxygen -

If some man with but little education should chance to be present when a chemist was providing a supply of oxygen, he would be apt to look upon it with some degree of contempt, and deem it hardly worthy of his attention. No doubt he would be greatly surprised if he were told that it is to this odorless, invisible gas, that the ocean owes the greater part of all its strength and grandeur; and that this gas forms two-thirds of all the water that exists in our noble lakes, beautiful rivers, and glittering mountain tops. In all probability, he would think that you were conspiring at him, and trying to impose upon his credulity, if you told him that oxygen forms one half of all the sand he treads

upon, and one third of all the bricks, and two fifths of all the stones which he may chance to see around him. Nor would he be inclined to believe you, were you to tell him, that to this gas, every flower that blooms owes nearly all its beauty, and every tree that grows, its stateliness and luxuriance. Perhaps, if he were an ardent lover, he would not like to be told that the soft-haired, rosy cheeked maiden, who had charmed his eyes with her beauty, consisted, for the most part, of oxygen gas. But all this is undeniably true. These facts will give us some idea of the importance of oxygen, and if we wish to obtain a still better idea of its value, we need only reflect, that we would all fall dead in a moment

or two, if the Almighty, with a wave of His hand, or a nod of His head, should take away the oxygen from our atmosphere.

Oxygen was originally obtained by Priestley, by heating the oxide of mercury. Fluid mercury and oxygen are the results of this operation. It may also be obtained by heating the binoxide of manganese, a heavy black mineral, which exists in large quantities in Devonshire, England, and in other localities. This binoxide, when heated loses one third of its oxygen, and is converted into a compound of two other oxides viz:- the protoxide and the sesquioxide of manganese. Oxygen is best obtained

however; for the purposes of the chemist and physician, from chlorate of potassa - Chlorate of potāssa is composed of oxide of potassium, and chloric acid; and its formula is KO + ClO5. When this substance is heated, oxygen is driven off from both the acid and the base, and chloride of potassium remains. When chlorate of potassa is heated by itself, a high temperature is required to cause its decomposition. It has been found, however, that when it is mixed with the dried oxide of manganese, it will part with its oxygen much more readily, and at a much lower temperature. The oxide of manganese, itself, remains unchanged; and, in what manner, it persuades the

dearth of potash to give up its oxygen is at present a puzzle to chemists.

As all substances which burn in air do so because they unite with the oxygen of the atmosphere, we would naturally imagine that they would also burn in oxygen. This is the case. They not only burn, but they burn much faster and more brilliantly in oxygen than in common air. Thus sulphur burns with a beautiful blue flame, and the light of phosphorus when burning really dazzles the eye with its brilliancy. Many substances burn in oxygen which do not burn in air. Iron wire and steel springs burn in oxygen with an intense white light, and the

heat generated is so great that the particles of iron that fall remain red hot under water for some considerable time. Oxygen is not absorbable in common water, but is so, to some extent, in water which has been deprived of the gases which usually exist in it by boiling. When water is decomposed by the voltaic current, the oxygen, which is given off, has a peculiar odour, and evidently is not in the condition in which it usually exists. Oxygen in this state is termed Ozone. Ozone is also produced by passing electric sparks through oxygen in its ordinary condition. This is sometimes done by nature on a grand scale, when the electricity of the heavens darts

through the atmosphere, from cloud to cloud, or from the clouds to old Mother earth.

The combination of all substances with oxygen produces some degree of heat; although if the oxidation be slow, the heat may not be appreciable. In some cases, as I mentioned above, this combination is attended with the evolution of a brilliant light, and an intense heat. Thus when coal gas and oxygen are burned together; the heat evolved is sufficient to melt platinum. The reason why this heat is evolved is, in my opinion, best explained by the theory, that the specific heat of one of the gases, or of each of them, is greater than

that of the compound which they, by uniting together, form; and, therefore, some of this heat must necessarily be given off. Oxygen unites readily with all the other elements, except fluorine, and forms with them both acids and bases. When one proportion of oxygen unites with one proportion of a metallic substance, the compound is generally a base or an alkali. An acid, on the other hand, is usually formed by the combination of two or more equivalents of oxygen with one equivalent of some non-metallic substance.

One fifth of the atmosphere of the earth consists of oxygen; - the remaining four-fifths being nitrogen. These gases are not

chemically combined, but mechanically mingled; and it was at one time supposed that various local diseases could be accounted for on the supposition that the air in those localities was deficient in some of its elements. But a series of carefully conducted experiments has demonstrated that this is not the case, and that the air, so far as its elements are concerned, is essentially the same, whether it be taken from the tops of the highest mountains, or from the bottoms of the lowest valleys.

Oxygen is respirable.

If the respiration of pure oxygen is continued for any length of time how-

ever; it excites the system too much, and thus causes death. A mouse or any other small animal will live about five times as long in oxygen as he will in the same quantity of air. Why this is so seems obvious to me:- simply because the animal has at its command five times more of the life restoring element in the one instance, than he has in the other.

Oxygen has been but little employed hitherto as a medical agent. It seems to me however that too little attention has been paid to this subject by physicians. It has been proved by experiments that the

breathing of pure oxygen hurries the respiration, and increases the action of the heart. It seems to me then it could be beneficially administered in those diseases in which the respiration is slow, and the circulation sluggish. I see no reason why it could not be used with advantage even in phthisis itself — the monarch of all diseases. If we examine a phthisical patient, we will find that he stoops more or less, that his chest is contracted, and that his shoulders are approximated, ~~and~~ so that his lungs evidently have not room to play in, and properly perform their function. The function of the

Lungs, as we all know, is to take carbonic acid from the System, and impart oxygen to it; - in other words to convert venous ~~blood~~ into arterial blood. Well, if this function is interfered with, the blood must necessarily be imperfectly oxydated. This being the case, what more obvious remedy can suggest itself than that oxygen should be taken into the Lungs? One inspiration of pure oxygen would have as much effect towards oxidating the blood as five inspirations of common air: In the second place, we will find upon reflection, that those persons are most liable to this disease, who lead sedentary lives in ill venti-

called apartments, who exercise but little the muscles of their chests, and whose lungs, consequently, are rarely inflated with a due supply of oxygen. It seems then natural to imagine, that in these cases, the scanty supply of oxygen is the predisposing cause of the disease. This being so, is it not in accordance with Medical Philosophy to declare that oxygen is indicated? It has been found that riding on horseback is about the best remedy that can be made use of in the treatment of phthisis. Why is this so? Because, in my opinion, when a man rides on horseback, he breathes oftener, and more freely, than he otherwise

world, and takes into his lungs a much greater supply of oxygen. Alcoholic liquors have sometimes proved beneficial in the treatment of phthisis. These liquors hurry the respiration, and cause the blood to circulate more freely through the system; they also have a great tendency to make a man walk about, and take exercise, and thus, both directly and indirectly, contribute to the more perfect oxidation of the blood. Claret of Jurançon has been recommended in this disease on the supposition that it would maintain a portion of its oxygen in the blood. It seems to me, however, much more rational to administer the oxygen itself through the

lungs, as these are the organs especially constructed for taking it. This goes into the system. I would not be understood as recommending pure oxygen to be taken into the lungs of all persons afflicted with consumption, although I think this could be done, to advantage, in a great many cases. Still I would advise all phthisical persons to inflate their lungs, as fully and as often as they can, with the oxygen, as it exists diluted in our atmosphere. During the convalescence from typhoid fevers, when the patient has been, for months perhaps, stretched on the bed of sickness, breathing, slowly and feebly, an at-

mosphere, deprived probably of its due supply of oxygen, I see no reason why an occasional inspiration of this life-bestowing element might not prove beneficial. It would have a tendency, I think, not only to purify the blood, but also to act as a healthy arterial stimulant. In intermittent and remittent fever, just before the cold stage is coming on, a full inspiration or two of oxygen would certainly have the same stimulating effect for which other remedies are administered, and might perhaps produce such an impression on the nervous system as to ward off the paroxysm altogether. It is admitted by all intelligent physicians, that a certain malaria is the chief

bial cause of remittent and intermittent fevers, in other words, that the system is impregnated with the disease through the agency of the lungs. Well, if the blood can be contaminated with disease by means of the lungs, can it not also be rendered pure through the same agency?

For these reasons, I am decidedly of the opinion, that oxygen can be used to advantage in the above mentioned diseases, and in other maladies, which will readily suggest themselves to the intelligent physician.

W. H. Benson

An Inaugural dissertation on
Typhoid fever submitted to the
examination of the Provost
Regents and Faculty of Physic
of the University of Pennsylvania
for the degree of Doctor of
Medicine by [illegible]

Typhoid fever is a disease to be
met with in almost all inhab
ited regions and is generally
known as common or continued
fever. The symptoms of this
disease vary considerably, frequently
having a strong resemblance to
those of Remittent fever, the dis-
ease sometimes begins abruptly with
a chill, but the few cases in which

I have been a witness, come on insidiously, the patient feels un- comfortable, restless, and complains of some weakness, there is gen- erally at the same time a slight headache, the tongue at first is but little if any changed, some times it is coated with a slight fur, the appetite is less somewhat impaired, and the patient complains of weakness on making the least exertion, the skin may be hot — face flushed, and pulse somewhat accelerated, as the disease advances the above symptoms gradually in- crease with looseness of the bowels — frequently amounting to diarrhea

the disease may now be said to —
have fairly set in, the pulse is —
more rapid, headache more severe
and the appetite nearly if not en-
tirely lost, there is much thirst
and considerable weakness, the
face which in the onset of the dis
ease was flushed, presents at
this period frequently a dusky
hue with a dullness of expression
bleeding gums. The nose is a com-
mon symptom of this disease and
was present in all cases which
I have seen, the hemorrhage be-
ing generally but very slight —
as the disease advances, the symp
toms continue to increase and in severity

the stomach becomes irritable, diarrhea increases, the skin becomes hotter and dusky hue more perceptible the tongue thickly coated with fur except at the tip and edges which are generally red, the urine is frequently scanty and high coloured, and frequently distention of the abdomen takes place at this time, about this time there will be found on examining the abdomen small red spots, known as the rose colored spots, they bear a strong resemblance to flea bites, but are to be distinguished by their having no black specks in centre, at

this time if the disease continues the symptoms still increase in severity. the tongue begins to assume a dark or brown colour, the distention of abdomen increases, swallowing is sometimes painful and difficult, delirium frequently sets in taking the place of headache, there is ringing in the ears, sometimes deafness, the eyes become inflamed and the tongue is protruded with difficulty, finally a typhous condition is set up. the tongue becomes incrusted with a dark border, as well as the gums and teeth. the pulse becomes very small and frequent, there is subsultus,

tendinum, sometimes rigid contraction of the muscles, the patient becomes more feeble, and is continually slipping down in bed, involuntary evacuations frequently take place, the urine is sometimes totally suppressed, if the disease in the person fatal, the pulse gives way, is scarcely perceptible, the extremities become cold, the whole surface is bathed with a cold clammy sweat — the abdomen becomes enormously distended, and the flame of life flies away, sometimes by convulsions generally the patient dies without any painful struggles

such is the course of typhoid fever when it is to end fatally the principal symptoms being the slowness of disease, the bleeding at nose, diarrhoea, severe headache, dusky hue of skin, rose coloured spots, dark tongue, sordes about the gums and teeth distension of abdomen, and extremely weak pulse, when the disease is to terminate favourably, the tongue becomes moist, begins cleaning at tip and edges, pulse grows stronger the skin becomes moist, abdominal distension disappears, appetite gradually returns, at this time you will find that emaciation becomes more evident, than it was before,

the fever began to subside, there is
sometimes a fatal termination of
this disease when not looked for
the patient is suddenly seized with
violent pains in the stomach, pulse
becomes frequent, there is vomiting
the expression of the face becomes
ghastly, and death ensues from
perforation of the bowels, this
is an accident that sometimes
occurs, though very seldom The
duration of typhoid Fever is from
twenty to thirty days.

Anatomical Lesions

There is scarcely an organ in
the body that is not more or
less affected, The brain liver
heart spleen &c, but those that

are invariably affected are the Elliptical patches situated on the lower part of the Ileum, known as the glands of Peyer, and the other entheric glands, they may be inflamed, hardened, softened, or ulcerated

Diagnosis

This fever is to be characterized from other fevers by absence of attack, diarrhea soon after beginning of disease, dull expression of countenance dusky hue of skin, epistaxis, rose colored spots, distention of abdomen all of these symptoms are not necessarily present, but generally a sufficient number to diagnose the case, dissection always confirms

the diagnosis, if it be Typhoid fever the glands of Peyer and Mesenteric glands are always affected, Typhoid fever in some respects resembles Typhus, but may be diagnosed by the following, in Typhoid the bowels are always loose, in Typhus they are generally constipated, nor is there hemorrhage from bowels as in Typhoid, no epistaxis, nor rose colored spots, Typhus is certainly contagious, Typhoid seldom, Typhus may attack those of any age, Typhoid seldom attacks any but those of early adult life, and finally the glands affected in Typhoid, are unimagined in Typhus. ——

Prognosis Typhoid fever is a very serious disease, but by proper treatment most cases may come to a favorable termination, but we cannot generally judge by the appearance of disease, unexpected complications may take place at any time or stage of the disease, perforation may also take place even in the mildest cases, some seasons the disease proves much more fatal than during other seasons, consequently the prognosis should be cautious, the stronger the constitution previous to the attack, the more favorable will it make the prognosis. Causes, as regards the cause,

of Typhoid Fever, nothing is as yet definitely known, it may be brought on by exposure to cold and damp also may be brought on by fatigue either of body or mind, some think it is caused by miasma, it sometimes happens in crowded houses — and houses badly ventilated, but it occurs quite as often in other places even the healthiest regions — some consider the disease contagious from what I have seen, I think it is in some instances contagious the disease never occurs a second time, and generally attacks those of early adult life, but may attack all ages, I saw a case which

was pronounced one of typhoid fever by an eminent Physician, in an old Lady at least seventy years of age. The disease may occur at any season of the year but most generally (I believe in fall) and winter

The treatment, in beginning the treatment of typhoid fever, I would use very small doses of medicine, as there is an unusual susceptibility to the influence of cathartic medicine, yet it is necessary that the bowels should be evacuated, I would begin by giving a few grains of calomel with from four to six grains of rhubarb, or a small dose of oil or sulphate of Magnesia if there be much pain it would give

ten or fifteen drops of Laudanum —
it is necessary that the bowels
should be moved every day once —
if the bowels be open and free
no aperients are requisite, when
there is acidity of stomach it is
known by the evenness of breath
under these circumstances magnesia
would be an appropriate
medicine, the stomach may some
times be irritable and at the —
same time a cathartic may be
indicated, the object may be accom-
plished by enemata, In regard
to general bloodletting I do not
think it often requisite, though it
may be in some instances, when

there is a full and strong pulse, and inflamation or congestion of the brain is obvious. bleed is to be taken from the arm, the principal use of bleeding is to prevent local inflamation, but if carried too far it may produce fatal prostration, the patient should sit up in bed, and so soon as the pulse begins to give way, the bleeding should be stopped. Diaphoretics are sometimes very useful, the best or one of the best is Citrate of Potassa given in water about 5gr to oz, if the stomach be not too irritable ½ of gr of tartar emetic may be added — should be given when skin is hot and dry and the pulse not too feeble,

When the nervous symptoms appear.
nitric ether and small doses of tar-
tar emetic continued may be given
during the day every two hours —
at night if the patient be not
off opium or some of its prepar-
ations may be given, Paregoric in
tea spoon doses often will answer
well, opiates would be contra-
indicated if there be a determ-
ination to the head or stupor
Ice cold water may be given to
the patient and will often be
found acceptable, sponging the
surface with cold water or vinegar
& water will do good, but should
be dispensed with as soon as

The patient complains of chilliness cold applications to the head will be found useful when headache is severe, for pain in stomach warm fomentations, cataplasms or blisters may be used with some advantage, should be pain exist in any particular part, a few leeches or cups may be applied, should diarrhea become exhausting astringents should be resorted to, the best being [illegible] of lead, kino, or tannic acid, to these may be added opium when not contraindicated, opiates are also useful when there is wakefulness, uneasiness, or other nervous symptoms, camphor and sweet spirit

of nitre are also useful, mercury is highly recommended in the stages of hydrated Fever, I think it useful when there is a general failure of the secretions given in very small doses repeated every hour or two, and continued until the gums are slightly touched, large doses should never be administered. Ipecacuanha may be added to preparation of mercury when the stomach is relentive, it is useful as an adjuvant in promoting bronchial secretion. Dr. Wood considers turpentine as a very valuable medicine, should be given

in the drop doses, when the stomach is much distended and the tongue red; in the advanced stage of hydrothorax the debility is so great that the use of stimulant becomes necessary, and are absolutely essential. They are sometimes called for in the early stage, though they are seldom required before second and sometimes not until the third week, the state of the pulse will generally indicate. They need be employed, when ever the pulse is slow and feeble and cramps of the extremities. The use of stimulants should be immediately resorted to, the

most valuable, being wine whey, brandy punch, to be given in a dose of a tea spoonfull or more to be given every hour or two according to the urgency of the case, when exhibition prostration takes place sulphuric ether is said to be an admirable remedy. it is also useful in inducing perspiration, checking diarrhea, and producing sleep, also useful in relieving nervous disorders, should never be resorted to when the brain is affected, opium or some of its preparations is useful given in 1/4 or 1/2 gr doses every hour or two according to urgency of

case, Sulphate of Quinia has been highly recommended in this disease, and I think may be used to advantage in the low stage of disease, it is of no value in the early treatment, when debility is very great with collapse of extremities, stimulants should be resorted to, such as brandy and Cayenne pepper, hot tea of Lobelia, also sinapisms applied to lower extremities, the temperature of surface may also be kept up by the use of bottles filled with hot water, or heated bricks, when the delirium becomes obstinate the head should be shaved, and

blistered, when hemorrhage from the bowels, acetate of lead is one of the best astringents to be used. When peritonitis or perforation takes place, our only hope will be in resorting to large doses of opium, I should consider blistering at the same time to be useful during the last stages of typhoid fever, careful attention should be paid to the bladder and the introduction of the catheter whenever there is a retention of urine, strict attention should be paid to the diet, consisting in the early stage of solutions of barley water, tapioca, sago, or rice water

the patient may use as drinks, iced lemonade, or pure ice water in small quantities at a time, as the disease advances the diet should be more nutritious, but not stimulating. panada with the addition of a small quantity of wine, a little milk may also occasionally be given, in the more advanced stage animal — food may, and should be given — such as beef essence or essence of mutton, you may give at same — time milk punch, or wine in a — pure state, during convalescence The patient should be carefully watched, and kept from a too free indulgence of food, bowels should

be moved once each day, and when night sweats and exhausting diarrhea bitters, and mineral acids should be resorted to, The patient should not exercise to fatigue, but be gradually restored to health This finishes all I have to say in regard to Typhoid Fever.

Respectfully
Yours

8th of February 1861 R. H. E. Robbins

[illegible]

on

[illegible] of the Blood

submitted

to the examination of the Board

of

[illegible] Faculty of Physic of the

University

of [illegible] as the Degree

of

Doctor of [illegible]

By

[illegible] C. [illegible]

It is essential to the well being and development of all organized things that a peculiar fluid should circulate through every portion of their mechanism. For the accomplishment of this end there are appropriate channels or blood vessels ramifying and anastomosing within their structure. In the higher orders of animal life the circulatory apparatus consists essentially of 1st a heart or central organ

of circulation, 2nd of arteries, 3d of veins, 4th of capillaries. In order better to comprehend the theory of the circulation and the ends which it is intended to subserve, I will first briefly notice the physiology of this important function as manifested in the lower phases of organic life.

Geology teaches us, and the fact is conceded by most scientific men, that this earth at various epochs of its history has been peopled by orders of animals which have lived for a time and then become extinct, giving place to another and higher order in the scale of animal life. We also informed that in the beginning the earth was void and without form, that the mysterious Spirit brooded over the chaotic abyss and the light was divided from the darkness. We read further that the first appearance of an

instead of the dry land appears [illegible] the
[illegible] yielding fruit after its kind. It seems that
the earth by reason of its thermometric [illegible]
[illegible] condition was not capable of sup-
porting animal life except perhaps a few of
an extremely low degree of organization. In these
Protozoans no trace of a circulatory apparatus is
to be found but are dependant for their nutrition
simply upon the medium in which they ex-
ist subsisting by imbibition, some of them appear
to be absorbing sacks and may be turned inside
out without being in the least degree incom-
moded, but continue to flourish as before. It is
in the vegetable kingdom that we are first pre-
sented with the phenomenon of a circulatory ap-
paratus, but in plants, instead of being supplied
with the complicated arrangement found [illegible]

the highest orders of life, we find only the cap-
illaries are concerned. The nutritive fluid or sap is
propelled by a vis a tergo force originating in the
spongioles or minute root fibres aided by the
nutritive action going on in its structure. This
acts in propelling the sap on the principle that
if two fluids communicate with each other
through a capillary tube for the walls of which
they have different affinities, motion would
place the fluid having the strongest affinity
pushing the other before it. These capillary tubes
ascend longitudinally from the roots of the pla-
nt to its leaves which sustain the same
relation to the sap that lungs in animals
to the blood. But we find one important func-
tion which is subserved by the blood in animals
does not obtain in plants, that of maintaining

and equalizing animal heat though this must be taken with qualification, as we do notice a rise of temperature in plants at two periods of their life first during germination, second at the time of putting forth the leaves or rather the flowers. In plants have not the power of self motion there is no waste of tissue hence no development of heat. The quantity of fluid circulating is entirely dependent on the external temperature and the amount of moisture supplied for in winter we notice plants appear to be in a state of torpor. We therefore infer that the sap has but one function to perform, to carry nutritive material to the substance of the plant. It ascends through the capillaries to the leaves, here it takes up carbon and descending between the epidermis and the wood

fibre distributes its carbon for the development
of the plant. We find as we ascend the scale
of animal life the circulatory apparatus becomes
more complex as it has a variety of functions
to perform, and that there is also a variety
of chemical constitution and color in the flu-
id circulating. In the lower types of animals
this fluid reaches no higher grade than chy-
me, in others of somewhat higher development
it is chyle, and finally it becomes in the
vertebrates red, and of the highest degree of org-
anization to which it attains. In the earth
worm the circulation is carried on by a dorsal
vessel which has the power of contracting and
drives the blood through vessels communicating
with the anterior extremity to the head
and the system generally it is then later

[illegible] approximate vessels discharged in the posterior part of the dorsal vessel [illegible] in like manner distributed to the system. We notice that the rapidity of the circulation in animals is in direct proportion to the activity of their muscular movements, hence in those insects which have such remarkable powers of motion we should expect to find the organs of circulation of a high order of development, but on the contrary we find the circulation less vigorous than in some animals whose movements are extremely sluggish. Though when we consider that this rapidity of circulation is to expose the blood to the atmosphere in order that oxygen may be supplied to burn of the waste material consequent on muscular exertion, we can readily understand

and [illegible] this [illegible] circulation [illegible]
for in that we find minute air tubes or trachea
ramifying [illegible] [illegible] [illegible] [illegible]
the blood in every part of its course to the direct
contact of the air. In the department of [illegible]
lases we first notice the heart assuming the
sacciform and muscular appearance hav-
ing a distinct auricle and ventricle but it
receives and propells only arterial blood. The
blood being secured from the respiratory or-
gans, is then sent through the aorta to the
system, again without returning to the hea-
rt is transmitted to the respiratory organs
hence they have only a systemic heart.
We now come to the consideration of this
important function in the highest de-
partment of animal life the vertebrates

[illegible]
-ice in the clap of reptiles that the heart has
attained a higher state of development con-
-sisting of these cavities two auricles and a
ventricle, but instead of all the venous blood
being sent to the lungs as in fishes we find
that the ventricle contains a mixture of
the two kinds of blood, for the carbonized bl-
-ood returning from the systemic capillari-
-es by the vena cava pouring its contents into
one auricle thence it is sent into the ventri-
-cle, here it mingles with the pure blood com-
-ing from the other auricle having pass-
-ed through the lungs and secured its ox-
-ygen, as these are animals of a very sluggish
nature, if the entire mass of blood was exposed
to the influence of oxygen it would exercise

on our stimulating effect but in fishes as the medium in which they [illegible] but a limited amount of oxygen it is necessary that all the blood should be exposed to its influence. We come now to the consideration of the circulation in the [illegible] blooded animals first of these the birds will claim our attention. As before stated the activity of the circulation or what is the same the oxidization of the blood is in proportion to the vigor of the muscular movements, accordingly in birds which have extraordinary powers of motion as from the facilities for communicating oxygen to the blood are very great, not only is the blood sent rapidly to the lungs but air is also sent to the blood by cavities in the

and cellular tissue. It is in the Virus that
we first notice a double heart respiratory and
[illegible]. Having noticed in short the [illegible]
ing which the aeration of the Vivus is accom-
plished in the lower phases of animal life
this brings us to the study of this all impor-
tant function in the class mammalia or
man himself. It is to Harvey that we are
indebted for the theory of the circulation
It seems a mystery that a knowledge of
the circulation of the Vivus should have re-
mained so long veiled in darkness. Yet like
all other great discoveries is simple when
once understood. The opposition with which
Harvey's theory met at the hands of scien-
tific men of that day shows the [illegible]
of the human mind to accept error rather

then truth. But the blood does spontaneous fro-
-ies through the veins, while those who attemp-
-ted to overthrow Harvey's theory have passed
into merited oblivion, while the name of
Harvey is immortal. Before studying the
manner in which the circulation is car-
-ried on, we will first notice the manner
in which the blood is built up or mani-
-factured, its composition and uses which
it is intended to subserve. It is necessary
in order that a proper supply of blood
may be furnished that a proper digestive
material should be taken into the way or
rather into the alimentary canal from
which the blood is to be manufactured
the food having undergone a proper trituration
and having attained the necessary [illegible]

of solution by commingling with the various
secretions with which it meets in its course
along the alimentary canal is presented to
the myriads of absorbent villi which stud the
mucous membrane of the intestines. The nu-
tritive fluid taken up by the absorbents is
conveyed by the lacteals to the mesenteric
glands. It undergoes changes in its constitu-
tion as it passes along the lacteals. When
first leaving the villi it is of a milky ap-
pearance and is then termed chyle. By exam-
ination it seems to owe its color to the mi-
nute fat globules which it contains, when it
arrives at the mesenteric glands it undergoes
a further change, and having been submitted
to the action of these glands it is found on
examination that one of its constituents

the fat has disappeared and another of a higher
degree of organization taken its place. This the
most important part of the nutritive fluid
is termed fibrin. Having passed through the
mesenteric glands the chyle loses its milky
color in consequence of having lost its fat
together with some of its albumen which is
so changed into fibrin it now becomes of a
clear tempered colour and is termed lymph.
Having undergone a suitable degree of develop-
ment it is poured into the thoracic duct
thence it is poured into the Uvea vessels at the
junction of the left jugular and subclavian
veins. Besides the absorbent villi just noticed
there are other vessels which assist in blood
making. These are called absorbent vessels com-
posed of minute arteries and veins, also the

superficial [illegible] [illegible] [illegible] [illegible]
albumen which has eruded from the vessels
during the nutritive actions going on in the
tissues. We find on analysis that healthy
human blood contains in a thousand
parts about 784 of water 70 of albumen 3.0 of
fibrin 131 of blood discs fats and salts in
variable proportions together with biliary coloring
matter urea &c. The quantity of blood in the
system is in proportion to the weight of the
body as one to eight. The fibrin is the constitu-
-ent of the blood which goes to building of
the tissues. It is to this constituent that
the blood owes its peculiar quality of coagu-
-lation. By this we mean when blood is
drawn from a vessel and allowed to remain
for a short time [illegible] [illegible] [illegible]

[illegible]

[illegible] a thin fluid called serum. The blood as it circulates is divided into two parts, plasma and [illegible]. The plasma differs from serum only in containing fibrin [illegible] circulates is continually taken up by the tissues but when drawn from the vessels the fibrin contracting encloses the cells within its mesh as forming the clot and squeezes out the serum. When this process is in any way [illegible] the [illegible] being of greater specific gravity [illegible] tendency to settle to the bottom the white [illegible] being [illegible] and fewer [illegible] surface constituting the buffy coat [illegible] fibrin contracting the clot becomes cup shaped. This shape of the clot [illegible] of inflammation is now an exploded theory

[illegible] are composed of globulin and hematin
these are the carriers of oxygen for the purpose of
uniting with the carbonaceous material arising
from the debris of effete cells. These cells are of af-
ferent shape in different stages of their develop-
ment and in different animals. The human
blood disc is sea, [illegible]
nucleated. In some of the lower animals the
blood discs do not reach so high a stage of de-
velopment being spherical and nucleated. The
human cells [illegible]
the vertebrates being about 1/3000 of an inch in
diameter. These cells in their earliest stage of
development are white spherical and nucle-
ated, then they become disc shaped and non-
nucleated, and finally reach the highest state
of development becoming red disc shaped bi-

[illegible] a [illegible] [illegible] [illegible] [illegible] corpuscles
[illegible] the [illegible] in the proportion of one to four hun-
dred [illegible] [illegible] [illegible] [illegible]
[illegible] the embryos of the sea. Her Hallow the
[illegible] they do not undergo a transformation
into the sea, and have no other relation than
that of juxtaposition. [illegible] [illegible] [illegible]
to the blood its sea color. This redness of the
corpuscles is due in some degree to the iron they
contain. Though as there is great difference
between venous and arterial blood both of
which contain [illegible] [illegible] [illegible] [illegible]
some other cause for the scarlet color of
arterial blood. This is proven to be due to oxygen
though there is a difference of opinion regard-
ing the manner in which it acts. Some think by
affecting a chemical change [illegible] [illegible]

[illegible] by [illegible] the [illegible] of [illegible]
[illegible] all the colored rays are absorbed save the red
which is reflected. We have thus noticed briefly
the formation and constitution of the blood, we
must notice the functions which it performs
in the economy, also the apparatus by which it
[illegible] every part of the system [illegible]
in circulation are to afford nutriment for the
system, to introduce oxygen, to remove effete
products and to maintain and equalize an
[illegible] heat. In order to effect these ends the
blood must be sent to the [illegible]
the body by suitable [illegible]
[illegible] the heart. We have to notice in
the [illegible]
[illegible] and renal circulation. It is obvious
that the aeration of the blood is the grand

[illegible] power of the circulation for if the supply of oxygen is cut off the heart [illegible] in the earliest stages of intra-uterine life the blood is seen to move before the existence of a heart. The first rudiment of a heart in the foetus is simply an expansion of a blood vessel as development proceeds [illegible] [illegible] forming [illegible] separate cavities which continue during intra uterine life as the two auricles communicate by the the foramen ovale. This little organ acting simply according to the laws of hydrodynamics was long regarded as the seat of all the fierce passions that stir the human soul, but modern physiology has freed it from this tremendous libel area from that within the cranium is "a small [illegible] airy hall the dome of thought the palace of

[illegible] The heart beating at the rate of 78 strokes per minute in the healthy adult and which when we first consider its action seems to suffer no repose is in reality in [illegible] but little over half its time. These seems to be a difference among physiologists [illegible] the [illegible] in which the impulse of the heart [illegible] some affirm that during the systole the apex approximates to the vase owing to the contraction of its muscular fibres. Mr Dalton finds it difficult to understand how if the apex was contracted towards the vase that it should be made to strike the thoracic walls, for if the above theory be true it should be drawn away from the chest [illegible] argument upon experiments performed on the lower animals, removing the [illegible]

[illegible] fire [illegible]
[illegible] clap, and weighs in the adult from
9 to 11 ~~[illegible]~~ ounces. The walls of the left ven-
tricle are thicker than those of the right, an
consequence [illegible] having to [illegible]
in propelling the Verra to the extremities
of the Body, while the right has only to [illegible]
[illegible] the pulmonary capillaries [illegible]
[illegible] of nearly the same capacity as the ven-
tricles through their walls are much thinner
only having to propel the Verra through
the mitral and tricuspid valves into the
ventricles [illegible]
[illegible] of the ventricles and auricles together
[illegible] with the [illegible] of the valves [illegible]
the sounds of the heart. The first sound
of the heart which is synchronous with

[illegible] is due to the contraction of the
[illegible] walls of the [illegible]
with the closure of the auriculo-ventricular
valves and perhaps in a slight degree
the rush of blood through the aorta and
pulmonary artery, the second [illegible]
is synchronous with the systole is due to the
closure of the semilunar valves of the aorta
and pulmonary artery. Connected with
the right ventricle is an ingenious safety
valve arrangement this prevents any over
distention of the walls of the ventricle with
blood permitting it to regurgitate into the
auricle, this is effected by one of the cordae
tendinae being attached to the valve by one
end, and to the dilating wall of the ventri-
cle by the other, so if the ventricle becomes

[illegible] descended it pulls on this cord which
opening the valve allows the blood to flow
into the auricle. In consequence [illegible]
[illegible] of the blood in the circulation [illegible]
commence at the pulmonic capillaries. Arri-
ving here as impure blood it parts with
carbonic acid and vapor of water at the
same time absorbing oxygen, this takes place
by endosmose and [illegible] action [illegible]
considered. The pure or oxidized blood is now
taken up by the pulmonary veins of which
there are two from each lung these con-
vey it into the left auricle, this contracting
propells it through the mitral valve into the
left ventricle, this now contracts and the
mitral valve closing the auricle valve is
forced open and the blood drives into the [illegible]

[illegible]
It is now taken up by the capillaries, here the vis
a tergo in a great [illegible] causes the [illegible]
moving through these minute vessels by the
nutritive action going on in them by which
chemical affinity is brought into play. The
blood is now conducted into the veins, the
vessels commencing where the arteries end
in capillaries, conduct the blood into the
right auricle by the Venae Cavae. The blood
in the veins having for the the most part
to ascend against the force of gravity these
vessels are supplied with valves, opening only
in the direction of the current, and thus
prevents the whole column of blood from
pressing on the veins. The force which propels
the blood in the veins is first the vis a tergo

[illegible] the capillaries are a
muscular contraction compressing the
veins and the valves permitting it to flow
only in the direction of the heart. Thirdly
by the expansion of the chest walls in in-
-spiration a partial vacuum is created and
as the venae cavae extend into this cavity
at each expansion of the chest an influx
of blood is produced. The blood having been
emptied into the right auricle is sent
through the tricuspid valve into the right
ventricle, thus contracting forces it through
the pulmonary valve into the pulmonary
artery, by which it is again brought to
the pulmonary capillaries again in the
same way to go the sounds of the cir-
-culation. The blood requires about a minute

[illegible] the circuit of the system traveling less rapidly in the veins than in the arteries and still more rapidly than in the capillaries. The arterial system beginning in a large vessel the aorta which continuing to divide and sub-divide till its extreme branches terminate in the capillaries. The arteries consists of four coats an external, elastic, muscular, and epithelial. The venous system on the contrary commencing in capillaries, and the branches converging form the venae cavae. The portal system is peculiar in beginning and ending in capillaries, the portal vein taking the blood from the capillaries of the alimentary canal empties it into the capillaries of the liver. here it is depurated and

... up by the hepatic vein to conduct it into the general circulation. The kidneys ... perform a like function in removing ... impurities from the blood. Before closing I will notice briefly the points of difference in the circulation of the fetus viz the placenta subserving the office of lungs into which empties the umbilical vein and arteries. The vein bringing the pure blood from the placenta, conducts it into the ductus venosus where it goes into the Inferior Cava, and so empties into the right auricle, but it meets with the impure blood from the superior cava, but by a valvular arrangement the pure blood without mixing with the impure continues through the foramen

rule into the left auricle from this into the left ventricle thence through the aorta to the system generally. The impure blood is sent by the right ventricle into the ductus arteriosus which empties into the aorta below its arch, hence it is prevented again going to the upper extremities, only enough blood is sent to the lungs to [illegible] as their function is not yet called into play and the pulmonary artery is only [illegible] entirely. In writing this I have not aimed at nor make any pretension to any [illegible] but it is simply a review of the theories of Carpenter, Kirks, Dalton and Draper.

Very respectfully
Richd. C. Boales

Inaugural Dissertation

on

The Question

Does the Study of Medicine Tend to Skepticism?

Submitted to the examination
of the Board of Trustees of the University of Virginia
for the Degree of
Doctor of Medicine.

by

John Thomas Tucker.

Does the Study of Medicine Tend to Skepticism?

In making the selection that I have, as the subject for my Thesis; I am aware, that it is one worthy of, and has occupied the pens of some of our best writers: yet I do not think it need be passed over by the most humble mind: for the field is wide enough for all to combat in who wish to defend science against the charge of infidel tendencies.

It has been said that the Medical profession, as well as other classes of scientific men are liable to become Skeptical upon matters

of religion: because the study of their branch of Science, particularly Anatomy and Physiology have a tendency to lead them into some infidel theory.

I have no doubt that when superficially examined, (especially by those who are willing to believe anything sooner than Divine Revelation) the study of Medicine may seem to tend to favor Theories opposed to the Bible: but I can see nothing connected with the Science, which would when carefully examined, favor in the slightest degree the doctrines of infidelity.

Among the doctrines that the study of Anatomy and Physiology are said to favor is the one "that Man

is but a higher order of the brute Creation: and as dies the one so dies the other". Man has been placed by nearly all Modern Zoologists under one genus "Homo" and classed with the Mammalia as a distinct order of being, of which he is the sole representative. It is unnecessary for me to go over in detail every anatomical difference between man and brute; as taught us by Comparative Anatomy; but shall confine myself to the chief points of difference.

There are many obvious points of difference between the lowest order of mankind and the highest order of brutes, as the Chim

panzee, Monky or any of their allies, which were said by Lord Mon-boddo to have been the progenitors of Man. The human skull is nearly balanced upon the apex of the vertebral column, and the slight preponderance it has forward is corrected by the superior strength of the posterior muscles of the neck, over those placed anteriorly; by means of which the head is kept erect upon the spine: the peculiar, inverted, pyramidal, shape of the spinal column, supporting as it does the weight of nearly the whole body, causes it to be thrown vertically upon the pelvis; and the tendency to fall foward, caused by the weight of the abdominal viscera,

is corrected by the superior strength of the lumbar muscles over the thorax of the abdomen.

The pelvis thus supporting the weight of the whole body, is proportionally wider in man than in the Quadrumana, or any of that class of brutes, and is received upon the femora; as by their peculiar bent and widened position to throw the body (still kept erect by the powerful glutei muscles) upon the knee which is also proportionally wider in man; than in the ape, down to the feet, thus keeping the body of man erect, and showing this to have been the position assigned him by nature; for any other position; if long continued would be insupportably painful and irksome. But in the Chimpanzee (the order of brutes nearest man); instead

of the condyles of the occiput being placed but a little behind the centre of gravity; they occupy the posterior third of that line, thus when erect, the head is nearly in a line with the vertebral column; causing the head to fall forwards, by nearly the whole of its weight into a horizontal position: The spinal processes of the cervical vertebrae which have comparatively little or no eminence in man, are very prominent in the Orang Outan; in order to give attachment to those muscles that support the head, and instead of the inverted pyramidal shape of the spine we have it bent nearly in the shape of a bow, neither has it the strength, or same number of vertebrae in the lumbar regions

that pertain to man: this construction tends to throw the body still farther forwards, and then the pelvis longer and narrower than in man, together with the articulations of the femora, which are so constructed as not to receive the weight of the whole body, com-pleter the position, the God of Nature has assigned him, which is at best semi-erect.

There are many other anatomical differences between man and brute; as that most distinctive feature; the hand (for in reality the Ape tribe have none).

In man the small size of the face; compared to the ~~compared to the~~ Cerebrum proves the Senses to be subordinate to the inteligence: whilst the large face and small cerebrum of the Quadrupeds, shew the

senses in him to be in the ascendency: accord-
-ingly we find the sensibility to light, odour,
sound, &c. much more acute in brutes, than
in man: but in those qualities belonging to
an "Intelligent Will" man is far very far
above the highest order of brutes as shown
says Dr. Good "By his comparisons and judg-
-ments of his own sensations, and drawing
conclusions from them as to their objective
sources." Again the power of using art-
-iculated words, enjoyed by all classes of
the Human Race; from the most degraded,
to the most enlightened: may by its cul-
-tivation enable them to exchange ideas,
and hold intelligible conversation with
each other: This gift is peculiar to man,
for those brutes, that resemble him most

in outward appearance are debarred from using articulate language, to a greater degree than some orders, lower in the scale by the construction of the larynx; which has a bag, or sac which receives into it the air from the trachea, instead of allowing it to pass into the glottis, which is necessary to produce articulation: Thus they are compelled to make known their wants, or inclinations to man, or each other; by their actions, or the different tones of their barking, howling, or chattering.

Nature has in all instances, provided the brute with means to protect itself, from the influence of climate, to procure nourishment, &c; the outward covering of the brute changes, as the season changes,

and differs as the climate differs; but man when left to Nature is the same naked defenceless being, wether he is a native of the tropics; or an inhabitant of the frozen regions of the north, it matters not in what position he may be placed, if the climate is such that it will not support life in that condition he must make use of his intelligence and call art to his assistance: or die, and. even when the climate will allow, there are few that go entirely naked; so few that it does not affect the general laws.

So also, it is with regard to food: whilst Nature has pointed out, and given to brutes, the means to secure their food without the assistance of art, man is again compelled, to resort to the grand distinctive differences between

himself and the brute) the intelligence, he means to support life; for although that nature does in many instances yield his food spontaneously; yet in most all, art must be invoked to his aid; for the Creator, when he cursed the Earth said, "By the sweat of his brow shall man earn his bread", and no class of mankind escapes that curse,

The power of using art to fill the void nature has left in the animal economy of man, for the preservation of life; is one difference between intelligence, and instinct: but there is another, and a greater proof, that they are different; and that is the continual progress of man in knowledge, and power. Compare the people of ancient Greece, Egypt & Rome, in their palmiest days, with the

enlightened Nations of our own day; nations that were once as barbarous, ignorant and degraded; as the Papuan Negro, or Nut digger of to-day: and we see at once the progress that Man has made; but where has the highest order of brutes advanced, or receded one step in any action (requiring reason to assist them in its performance) since the Creation of the World. Admit that by strict attention, and hard training a man may teach a dog, or a Monkey some understanding tricks; does this show he (the dog or Monkey) has a mind capable of receiving impressions, other than what he may receive by his imitative instinct alone? I think this is by no means the case; for he can neither leave records of those impressions; or teach one of his species, what he has been taught

himself; and thus it has ever been.

Take the young of the Chimpanzee, at birth; and raise it among men; now although it would differ in many respects from those, in a wild state; because of the different circumstances that surround it, still it could never be taught to speak; or in any other way transfer ideas to man, save in the instinctive manner of the rest of his species; and if at growth it be placed far from the habitations of man, it would in many instances, by its instincts, follow the habits of those, that had never seen the face of a man, or heard his voice. But on the other hand, if we take an infant at birth, from the lowest orders of Mankind, raise it amid civilization, cultivate its mind; as though born thus, although it might not receive education, as read-

-ily as one born of civilized parents, still it could be taught to read & write and give intelligible expressions of its own ideas to others; take it back at growth to the scene of its birth, and he would not lose what he had been taught; if he made use of the intelligence he poss-esses: but may still continue to acquire knowl-edge

In the face of those evidences, I could never believe with Lord Monboddo; that man is a descendant of the Ape, or Monky, nor that he is but a higher order of the brute: but must look upon him as a distinct order of being; standing alone master of the whole brute creation, by the power of intel-ligence over mere instinct, and by this intel-ligence (not his body) do I believe he was

made "In the image of his Maker", and into whom was breathed the breath of life, and he became a "Living Soul."

I now pass on to a theory, that is identical with respect to future life; to the one I have just passed over. It makes all our ideas, emotions, and actions, amenable to, and governed by the laws of Matter; denying at once all spiritual existence, and as a matter of course the immortality of the Soul.

This doctrine, the most seductive of all others was taught among the ancient Greeks, by Epicurus, and his followers; and among the Moderns it has many advocates.

In the studies pertaining to the Medical Science, we learn that matter does in a great degree control the mind; on account

of the inseperability of mind and matter in our present state of existence; yet it does not prove according to my views, that matter can or does always triumph over mind; or that its laws explain all the phenomena of life. The Mosaic Law declares "The blood is the life of the flesh thereof"; Epicurus taught, that life was aura, or gas diffused through every fabric; whilst Modern Chemistry shows us that Oxygen and Caloric is indespensible to our existence. Now so far as the body in the abstract is concerned, the blood is recognized by nearly all Modern physiologists as the life of the body; for by means of that fluid, assimilation is carried on, and if its current be turned from its natural channels, those parts that do not

receive it will wither, and die if the heart which is the seat of the circulation cease its operation; Then the death of the whole body takes place. So also with regard to Oxygen and Caloric; for if the lungs do not receive Oxygen to replace the Carbon they throw off, or the body be deprived of its heat, death would be the consequence. So all of those theories are to a certain extent true; but none exclusively so: they are mutually dependant upon each other, and neither capable of supporting life without the others. By those means the principles of life may be explained upon materiae facts; but we must remember they are but the Machines or forces that sustain life and not life itself, for that remains as great a mystery as ever. It was upon those principles

that Epicurus and his disciple Lucretius taught "That as the operations of the body were supreme, and caused all our ideas of surrounding circumstances to be formed for, and not by us, so at the death of the body all died."

In speaking of this subject Dr. Carpenter says "Towards the Pantheistic aspect of Deity, we are especially led by the philosophic contemplation of this agency in external Nature; for in proportion as we fix our attention upon the 'laws' which express the orderly sequence of its phenomena, and upon the "forces" whose agency we recognize as their immediate causes, do we come to think of the Divine Being as the mere First Principle of the Universe, as an all comprehensive 'law' to which all other

laws are subordinate; as that most general "cause" of which all the physical forces are but "manifestations", and in speaking of the Anthromorphic conceptions of Deity, he says "This conception is erroneous, in so much as it represents the Divine Nature as restrained in any of its operations by any of those limitations, that are adherent in the very nature of Man." Now to a certain extent, both of those doctrines of Monotheism are true, but in making man "A puppet that moves according as the strings are pulled," they ignore all the self-determining power in man, calls his power of Will a Material power and in short finds in the actions of Matter, causes for all our opinions, ideas, passions &c and would fain destroy our

belief in that part of our existence, which we hope will not be annihilated at the death of the body. The belief that the death of the body is but the beginning of a new life, is a natural one and is expressed by all classes of Mankind, from the highest to the lowest; and there is nothing dreaded so much by the greater part of Mankind as utter annihilation; except the Brahmins of India, I know of no class of men who embrace the doctrines of Materialism, outside of the civilized world; for almost every barbarian has his ideas of a Great Unknown. However erroneous those ideas may be; still it teaches us that there is something in our very existence; that teaches us there is a great I Am, and a

future state, whatever that state may be.

There are a great number of phe-
-nomena, that prove matter to have great
control over mind, We know that if any
abnormal action is set up in the Cerebrum,
the normal action of the mind ceases; the
most beautiful and sublime thoughts of
Man, panoplied in all their fine imagery,
may be suddenly cut short by a blow upon
the head; or a rush of blood to the ~~head~~
brain; we see the mind affected in different
degree by different diseases. We know that
intoxication is produced by a material
substance acting upon the Cerebrum, which
is a material body, furthermore, many causes
of insanity may be traced to disease of the
brain; either organically or functionally. Un-

-stitution broken down, and harrassed by disease will produce its effects upon the mind of the individual, The Physician as he stands by the bedside of a dying man, may hear him speak of the glorious sights he thinks he beholds as he stands upon the thresh--hold of the invisible world; yet he (the Physician) knows that this is not ~~the~~ (as his friends believe) an evidence of his joyful entrance into a land of light: but he looks upon a wreck of matter as producing a wreck of mind. The Cerebrum is looked upon as the seat of intelligence; and as this is a material substance, capable of being acted upon by Material causes, we see at once the close connection between Mind and Matter: we have evidence of

this in the delerium of fever, the aberration of mind, consequent upon injuries to the head; and in that peculiar state of idiocy known as cretinism.

If we now turn to the doctrine of the Spiritualist, with regard to the sources of mental operations; we shall find that he is directly opposite to the Materialist in his Theory; and can bring equally as plausible evidence that he is correct in his views. The Spiritualist maintains "That the mind is a seperate immaterial existence, mysteriously connected with a bodily instrument, but not dependent in any way for the conditions of its operations, than as deriving its knowledge of of extraneous things through its agency, and as making use of it to execute its determi--

-nations so far as these relate to material causes" (Carpenter).

The supporters of this theory have gone so far as to declare that a lunatic really suffers no affection of the mind; but that the bodily instrument is out of order and therefore gives no true indications to external objects, of his mental operations; &c. By this declaration the mean that the body can in no manner interfere with the operations of the mind, by giving rise to any emotions sensations, and that it serves as a mere machine to convey those impressions to external objects.

Now it will be useless for me to follow this doctrine to any length; for, we are most apt to form our opinions from what we can see and reduce to practice. I am aware of no branch

of a Physician's Study, that would lead him to believe a lunatic, (let him be such by any change of the brain either organic or functional) has his mind free and untrammelled: no, far, very far, from it, for as he is able to see in mat-ter the cause in many instances for the aberra-tion of intellect; and knowing or believing the Cerebrum to be the seat of the intelligence; he is most likely to look upon a wreck of matter as producing a wreck of mind; and leaving all such idle theories to those dreaming philos-ophers, who spend their lives in fruitless speculations, the truth of which they will never know until Death frees mind from all matter. If mind is completely independent of all matter, then why is it that upon the introduction of intoxicating agents to the brain

through the circulation, we have evidences of perverted actions of mind during the time their effects are felt, and stop when their power is exhausted: we have precisely the same evidences of mental operations in a state of inebriety, as of ebriety, in lunacy, as in sanity

But to a certain extent this doctrine embraces a great truth; for whilst matter does in a great degree control mind, mind, in an equal degree controls matter; nothing is better known by the Physician than this fact

All our emotions, as fear, hope, love, grief &, have their effects upon matter: a man under the effects of any strong emotion, cannot effectually conceal it from those constantly around him, he may control it for a time by a great exertion of the will, and thus con-

-eeal it, but the time will come; when the mind asserting its predominance over matter, will speak out. In revery and in trance, in hypnotism and Somambulism, we have evid-
-eneee of mind, but controled in various ways.

The Physician Knows that mind has much to do with both the cause and cure of disease, and in applying his remedies he knows full well, that unless he can inspire his patient with cheerfulness and confidence, his most potent drugs may fail to per-
-form a cure in the most simple disease; whilst another, might cure with but half the skill, provided he possessed the confidence of his patient in his treatment. We have proof of mental operation in every voluntary movement of the body: for Mind is the

force that acts upon matter, making it obey the dictates of the Will. The effects of mental attention upon bodily organs are well known to physiologists; they know that a state of expectancy will often cause persons to think things are real that exist only in their disordered immaginations. I shall give one instance as related in Dr. Carpenters work on "Human Physiology" "A Butcher was brought into the drug store of Dr. MacFarland, opposite the market place, laboring under a terrible accident; the man in trying to hang up a heavy piece of meat slipped and the sharp hook penetrated his arm, so that he was himself suspended. On being examined he was pale and pulseless and expressed himself as suf-

fering great agony. The arm could not be moved without causing great pain; and in cutting off the sleeve he cried out; yet when the arm was fully exposed, it was found to be uninjured, The hook having only traversed the sleeve of his coat". Since the connection between mind and matter is so close it follows as a matter of course that they will reciprocally affect each other; so that in part both the Materialist and Spiritualist are right, but, neither exclusively so, for (as Revelation teaches us) we have a body that is material Made of the dust of the Earth and a mind (or soul) that is immaterial, breathed into, and connecting him with his Creator. There is nothing in the Study of Medicine so far as I can see, liable to

lead one into either error

I have endeavored in the first part of my thesis to show some distinctions between man and beast, instinct, and reason, intelligence, and immitation, and; that man alone possesses a mind that never dies, a self-determining power that renders him amenable for "Deeds done in the flesh", for the doctrines of both the Materialist and the Spiritualist tend to make brute and man equal, for as says a celebrated author "The Materialist traces the origin of sensation and thought to a mere modification of common matter; refers the perceptions and reflections of brutes to the very same principles that produce it in man; and believe that this modification, is equally,

destroyed, in both cases by death, maintains that "as dieth the one so dieth the other, and man hath no preeminence ~~of~~ over a beast", whence ~~comes~~ his hope of a future existence, like that of Solomon who was without the light of the Christian religion; depends exclusively upon a resurrection of the body. The immaterialist ~~&~~, on the contrary ~~the~~ who conceives that mere matter is incapable under any modification of producing, sensation, or thought, is under the necessity of supplying to every being possessing those powers: the existence of another and very different substance combined with it; a substance not subject to the changes and infirmities of matter, and is altogether inseperable and impalpable.

For, if sensations and ideas, can only result in such a source in man, they can only result in such a source in brutes, since the link between the two is maintained by both parties.

It is unnecessary for me to go further, both doctrines are opposed to the Scriptures, and neither supported by anatomy or physiology, both of which prove that the body is made of corruptible material; both of which prove that there is something beyond mere matter, in the composition of Man; that gives him a self-determining power, which makes him accountable hereafter, for deeds done in this life

I must pass on in the last place to notice that doctrine of Skepticism which declares, "That, as the body

during life, and also after death is constantly undergoing a change there can be no resurrection. Physiology teaches us, that our bodies, are constantly undergoing a change, consequently, we do not possess the same body at different times; ~~but~~ and those particles thrown off from the body are resolved into their original elements, ready to be taken up again into the animal economy of another different being. But so far as the changes during life are concerned, ~~it~~ would not interfere with the doctrine of the resurrection, if this change stopped with the death of the body; but this is not the case; for long ere those changes by Chemical laws were known, the edict went forth from the Almighty "Man is of the dust of the earth

and to dust shall he return again", What Science, now proves to be a plain truth, was then as great a mystery, as the resurrection is to-day. Those who deny the resurrection of the body after death; say, That as the body goes back to its original elements, it may again become part of different human bodies, inhabited by different souls; and at the death of those bodies, be again resolved into its elements, to be used for the same purpose, and so on for an indefinite period: and if such is the case, then how is it? and to which of those different souls does this body belong; it cannot belong to either exclusively; therefore there is no resurrection of the body since it cannot be reunited to the soul. They think that

each soul must have every particle of the body that was laid in the grave (when they were seperated) reunited to it on the day of the resurrection. I am not aware of any such doctrine in the Bible; or at least I do not so understand the doctrine as taught by St Paul, who is the most explicit of all the inspired writers upon this subject. He says "it is like a grain of wheat sown in the ground, it decays; and out of it springs a new grain

God has never told us how much of the old body will enter into the composition of the new or reunited body; but St Paul in the figure I have spoken of above says "Thou sowest not that body that shall be" (Cor, XV, 25), thus proving that

it is not necessary; the body should be the same in every particle. Now, as for the theory that any particular part of the body is preserved (as the sacral bone) from which the new body springs; I consider it a great absurdity, for it is as easy to preserve the whole body, as a part, and the same law that effects one part of the body effects the other; one bone is as another so far as its relation to chemical laws are concerned.

Some persons who oppose the doctrine, say, that unless the whole body come forth and be reunited to the soul, then the change would not be a resurrection but a re-creation. I do not think this follows as a matter of course; for what matters it if the body of man after death goes through changes that

~~What~~ makes it a body inhabited by another Lord? At the resurrection, that body, and all matter that ever entered in to the composition of a human body, will all be in existence, and all will be resurrected, spiritualized, and made incorruptible, and out of this mass of spiritualized matter, God can give to the Lord "A body as pleases him", for St Paul (in speaking of the new grain that springs from the old) says "But God giveth it a body as pleases him". In saying so the Apostle distinctly tells us, that it needs not every particle of the old body; but some part of it must be present in the new; how much (as I have said before) we do not know. The Apostle makes use of the word 'seed' to show the manner in

which all matter is distributed after death, that was in the body during life, and also to show that it would again mingle ~~xx~~ with the elements from which it sprang.

And yet, scientific men, acknowledging as they do, the power of the Creator to bring together from the dust of the earth all the particles that forms the body of Man: deny his power, at last day; to raise all matter and "change it in the twinkling of an eye"; make it spiritual and incorruptible, and out of this mass of resurrected matter, "give to the Soul a body as pleases him" part of which (as before stated) belonged to it at some time while on Earth.

It seems to me a power to do the one would give a power to do the other, and

I can see no objection or contradiction to the resurrection of all the Materials of our bodies at the final day.

I have now finished what I have to say upon this subject, and though I have raised but a feeble arm, and made but a weak defence of the Science I have chosen as my study through life; yet I feel conscious that I am right, and even should a doubt arise for both better would it be to cling to the Christian religion than to be led astray, by the fanciful & fanciful theories of those philosophers who pass through life as though they had naught to account for hereafter; or we might be constrained to exclaim with

the dying Infidel when he spoke of the Christians hope

If I am right, still he is well,
If he is right, I sink to hell.

An

Inaugural Dissertation

On

Colitis or Dysentery

Submitted to the Examination

of the

Provost Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of

Doctor of Medicine

By

David Riley

Anno Domini 1861

Colitis or Dysentery.

This disease is most prevalent in marshy places when after hot or dry summers it often becomes epidemic. Those who are exposed to night are who reside in damp and close houses or are confined in holds of ships in hospitals or in jails are most frequently exposed to its attacks. It is sometimes caused by the same means wich brings on diarrhoea such as damp beds wet clothes unholesome food &c. as well as by violent cathartics unripe fruit and indeed whatever increases the natural irritability of the

intestines. The difference between diarrhoea and dysentery can be quite clearly seen, although they are both accompanied in most cases by violent and griping pains in the abdomen and in both the stools are loose and frequent but in dysentery the stools are an excretion of mucous often tinged with blood and tormina and tenesmus are in most cases present. While in diarrhoea those symptoms are by no means necessary features but the stools are of a feacal nature while those in dysentery the feacal mater is retained

or are expelled from time to time in rounded and hard lumps. Diarrhoea may be one of the exciting causes of dysentery. Dysentery is an inflamation of the mucous membrane of the large intestines and the desease is modified or aggravated according to the amount of surface over which the inflamation extends. If the lower portion only is affected there is not much danger but if the pain is difusable and extending alonge the colon the case is more dangerous and if there is quick pulse thirst vomiting and hiccup and rapid failing

of the vital powers it may be considered as fatal. Fever is often present in acute forms of dysentery but in mild and cronic cases where the inflammation is seated in the lower portion of the alimentary canal it generally runs its corse without much fever except in cases where it accompanies some of the types of typhus or intermittents and remittent fevers. The acute form may termanate in recovery or may pass into the cronic which in some cases termanate fatal but in the majority of cases the desease takes a favourable

[illegible] between the fifth and tenth
days and by attention the pat
ient will recover. At times hav-
ever from the extent of surface
inflamed and the severity of
the inflammation the system
is so depressed at the outset that
it seldom or never reacts.
If the disease should not
abait in a week or ten days
the symptoms [illegible] to
be aggravated the abdomen
becomes swollen and tend
the [illegible] and [illegible]
becomes more violent
the pulse [illegible]
[illegible] rapid the [illegible]

has a dry brown appearance
and in some cases delirium
is present. Even after the
worst of these symptoms
the patient may recover
though the case be a ted-
ious one. When a change
in dysentery is for the better
the pains become less
frequent and severe the
stools are more copious
and not so frequent and
they become of a [illegible]
bilious character and
at last nothing remains
but a slight [illegible]
in many instances [illegible]

caution should be strictly observed. In chronic dysentery there is often a watery purgering accompanied by most of the symptoms of dysentery and in nearly all cases by tenesmus which is very distressing and soon greatly exhaust the patient. The discharge are a mixture of a pale gray coulour with more or less mucous of a weight slimy substance. The treatment of cronic dysentery differs but little from that proper in cronic diarrhoea. The

danger in dysentery is in
proportion to the extent
of colon involved if
the tenderness be found
upon pressure to extend
alonge it whole length
and if there is reason to
believe the inflamation
has been kept up above
its entire surface the
prognosis is unfavourable.
When sudden cessation of
the lormina and tenesmus
and the occurance of
tympanites oedema of
the extremities a clammy
state of the skin or irregular

the mucous membrane
reddened and in many
the redness and
ulceration extends beyond

the mucous membrane and at times involve the whole of the parietes of the bowels. Dysentery attacks persons of both sexes and of all age those most apt to have dysentery are those who are most exposed to its causes. The people of miasmatic countries are more subject to it than others for the reason they are more exposed to the exciting causes and persons going from a healthy country to one of miasmatic they are very apt to be

troubled with dysentery.
In the treatment of dysentery there has been a great many remedies employed and under different circumstances different plans have been found successful. To treat a case of dysentery with judgment and skill no one drug in the materia medica should be prescribed in all cases but should be varied according to the violence of the symptoms and to the diversities arising from other affections

In mild cases of dysentery and where uncomplicated with any other disease the treatment is simple - as to relieve the pain and distress to remove the cause of irritation and subdue the inflammation by some of the forms of blood letting though not necessary in all cases of dysentery to bleed and in some cases and forms of the disease may be injurious.

Blood letting should be resorted to when there is a vigorous pulse and

much pain and tenderness in the abdomen, local or moderate bleeding is usually sufficient although in violent inflammatory cases and where the person is very plethoric it may be necessary to bleed largely at once. It is hardly ever advisable to bleed in advanced stages of dysentery. Emetics are useful in the commencement of dysentery in cases where the stomach is loaded with acrid accumulation of any kind as is shown by

[illegible] of life.
For the removal of this
some use the preparation
of antimony, the sulphate
of Zinc, &c. But the best
and the one most used
is ipicacuanha on the
account of its mildness
and prompt action.

Cathartics are among
the most effectual rem-
edies used in this disease
first to remove any
irritating substances
that has accumulated
in the intestines and to
diminish the congestion

in the portal circulation.
And it is necessary to be very
careful in there selection
and administration as
by using drastic medicine
more harm may be done
than good by irritating
the inflamed membrane
Therefore the milder purg-
atives should always be
employed nor is it necessary to
keep up a brisk purgation
but merely keep the bowels
open and free from irrita-
ting accumulations. Calom-
el is one of the most useful
cathartics used in dysentery

being mild in its action on the mucous membrane while it also excites the liver. It however should be assisted in its action by other medicines. In cases of dysentery as it is ordinary met with from five to ten or fifteen grains of calomel should be given at first and carried off by some other mild aperient castor oil is one of the best If the calomel should have to be repeated it should be given in small doses of two or three

grains. In the [illegible] type of dysentery the castor oil should be combined with a little laudanum and given in small doses at every hours or two or it may be given oftener if found necessary. Thus given it often operates as a laxative. Others use or prefer some one of the salts as the sulphate of Magnesia - sulphate of soda tartrate of potassa and soda and the bitartrate of potassa and &c. These should be used when there is much

fever and a hot dry skin and also used in combination with tartar emetic in solution to operate on the bowels and to relax the skin. When the symptoms assume a cronic form rhubarb or one of its preparations may be employed in the place of those last named and some opiate should be combined with them to releave pain and allay spasmodic constriction of the bowels. Diaphoretics are used in some cases for their depleting effect

but they should be used with great caution and judgement or they may prove a disadvantage. The warm bath is of advantage in some instancies in this disease which requires also to be used with grate care. Opium and its preparation are great remedies in dysentery it may be given alonge with a cathartic or may be given in combination with ipecacuanha. However when there is much fever it is best to postpone its administration untill the force

of the circulation has been reduced. Given in large doses at first is the plan adopted in most cases and afterward in the advanced stages it may be given in small ones generally at bedtime so as to produce sleep allay pain and assist the other medicines to act. In severe bilious cases and in those of a typhoid character and where there is no symptoms of scrofula Mercury may be given until salivation is produced this is

best accomplished by comb-
-inding it with opium and
ipicacuanha and given in
small doses and at short
intervals. Numerous other
remedies have been used
with more or less success in
this desease. The acetate of
lead has been used to
some extent in all stages
of this desease but is imploy-
-ed oftener in cases after
the acute form has subsid-
-ed to some extent. Foment-
-ations and emollient cataplas-
-ms applied to the abdomen
and warm poultices with the

addition of an anodyne often afforde relief. In the treatment of cronic dysentery where the disease is situated in the colon and rectum milde laxatives in order to prevent any accumulation in the bowls. This is best accomplished by the administration of small doses of castor oil senna rhubarb manna or some other medicine of that nature. This and the regulation of the diet is amonge the most important points of the treatment of cronic

dysentery other remedies have been employed as the oil of turpentine and some of the vegetable astringents and the nitrate of silver has been administered per rectum also the sulphate of Zinc given in solution with Opium &c.

Feb. 14th 61

An

Inaugural Dissertation

on

Tetanus,

Submitted to the Examination

of the

Provost, Regents,

and

Faculty of Physic

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

by

Horace A. Brooks.

Tetanus.

Under this name we recognize one of the most appalling and formidable, not only of nervous, but, of all diseases: of whose exact, or full pathology we are ignorant, and which we identify by the group of symptoms it presents rather than by any phenomenon of structural lesions. In a disease attended with such difficulty of treatment it is of the utmost importance that we should have cognizance of its approach, but it is rarely, if ever, given us: various symptoms are enumerated by authors as occasionally preceding an attack:— such as, an unaccountable feeling of terror, general lassitude

or uneasiness, a continued sense of chilliness; or, if there be a wound, twitching of the muscles in its immediate vicinity; deep seated pain sometimes extending to the spine; but these symptoms are very uncertain and can not be relied on; there is probably no premonitory stage, and the first symptom afforded us is that which is characteristic of the actual existence of the disease — tonic spasm of voluntary muscles. In most instances the muscles first affected are those of the neck, jaws and pharynx. The patient experiences some difficulty in bending or turning his head, and sometimes he has what is called stiff neck.

There is also some uneasiness about the jaws and he can not open his mouth without pain: gradually the jaws close and with great firmness; sometimes it is said with a snap. In four fifths of the cases recorded the disease commenced in this — the form denominated Trismus. With the closing of the jaws, or very soon after, the muscles of deglutition become affected, and in a short time there comes on what is frequently the most distressing part of the disorder, an acute pain at the lower part of the sternum, piercing through to the back, extending upon the rim of the diaphragm. Other muscles become rapidly involved, especially

those of the trunk and face: the disease then extends to the limbs, and ultimately almost all the voluntary muscles of the body are affected: those of the tongue and of the hands and fingers are generally last attacked, and frequently the muscles of the hands escape altogether, even though all the other vol-
-untary muscles are in a state of contraction. From the com-
-mencement of the disease to its termination the muscles in-
-volved are in a state of con-
-tinued contraction, and are swell-
-ed and hard in their centres: this contraction varies in the different stages of the malady;

slight at the commencement, it increases as the disease advances, and when at its height imparts to the muscles a hardness like that of a board. Of this continued or tonic spasm there are exacerbations: which at first come on at somewhat distant intervals, increasing in intensity and frequency as the disease progresses. The duration of an exacerbation is about two minutes, one occurring probably every ten or fifteen minutes, but the duration may be greater, and they may occur so that the patient is scarcely out of one before he is in another. Frequently there is no obvious exciting cause

of these aggravations, but generally speaking they are brought on by exertions of the body; even by the slightest movement, such as, an attempt to swallow or speak: sudden noises, a draught of cold air, in fact any thing that makes an impression on the nervous system, may cause them. The increase in the frequency of their recurrence is one of the most unequivocal evidences of the severity and danger of the case. All the convulsions are attended with intense pain — Some idea of this pain may be had by those who have suffered with cramp of the leg, spasm of gastrocnemius, if they can bring themselves to

imagine similar sensation in nearly all the voluntary muscles. The appearance of the sufferer during an exacerbation is truly horrible. The angles of the mouth are drawn upwards and outwards, exposing the firmly set teeth: the alae nasi elevated and expanded: the forehead corrugated, and the brow knit, the orbicularis muscle of the eye rigid, the eyeball motionless and staring: the tongue probably protruded between the teeth severely bitten: all the features fixed in a ghastly grin — the tetanus risus sardonicus: an appearance that is at once recognized as tetanic. The violence of the contraction is great, in some cases

exceedingly so; so great indeed as to produce rupture of muscular fibres or of a whole muscle; the teeth have been broken: joints dislocated: there is one case recorded in which the action of the femoral muscles fractured the femur bones; and another in which the psoai muscles were torn across: Dr Latham states that he once saw the recti muscles in front of the abdomen, thus torn in twain. But these effects are by no means common. Generally the muscles of the back are most affected, and as they overcome the abdominal muscles, the body in a paroxysm is drawn into the form of an arch, the occiput and heels sup-

-porting it: this is Opisthotonos. In a few instances the patient is bent in an opposite direction, the head and knees being drawn together: this is the form known as Emprosthotonos. Pleurosthotonos is that form in which the body is bent laterally, it is the most rare. Sometimes in the height of an aggravation, the antago-nist muscles counteract each other exactly, and the patient is rigidly extended. By some writers the term tetanus is con-fined to this form of the disease. The prognosis like the diagnosis is unaltered on account of the pre-ponderance of any one of the above phenomena — the disease

is the same whatever form it assumes. Although there is such great disturbance in the muscular system there is generally little derangement in the functions of the body not immediately dependents on that system. The pupil is variously affected, in some cases it is contracted, in others expanded, in other cases it is quite natural. The tongue is apt to get between the teeth of the jaws are ever somewhat retained, and by their sudden closure on the occurrence of a paroxysm to be fearfully wounded. The affection of the pharyngeal muscles, as before mentioned, is early in the disease: it gives rise to difficult deglu-

-tition, and occasionally to suffo-
-cative paroxysms, which are
highly distressing and danger-
-ous: when the patient attempts
to take liquids they are apt to be
throw back, out through the mouth
and nostrils: or by entering the
glottis produce trouble as danger-
-ous and distressing as that ment-
-ioned above. For this reason tetan-
-ic patients have frequently a
horror of liquids that is almost
hydrophobic. Although deglu-
-tition is difficult the patient generally
retains his appetite. Obstinate
constipation is an almost in-
-variable concomitant of this
disorder: there are many causes
combined to produce it, almost

any one of which would of it-
-self be sufficient; the principal
of them are, contraction of the
sphincter ani: deficiency in the
secretion of the intestinal juices,
consequent upon the excessive se-
-cretion by the skin: diversion
of the nervous influence requi-
-site to the due sensibility of
the tube, and its concentration
upon the affected muscle: the
medicines given. In some cases
the sphincter muscles of the anus
and bladder have been so rigidly
contracted as to render it ex-
-tremely difficult to introduce
the injection pipe and cathe-
-ter. The discharges are for the most
part extremely offensive and

unnatural. There is no fever though the temperature of the surface is often above the normal standard. Respiration suffers greatly: the lungs are but intensely inflated, a most painful feeling of dyspnoea is experienced: in its highest grade it amounts to suffocation; the air in the lungs is unchanged, the face becomes livid, and death takes place from apnoea. This may be caused either by spasm of the glottis or full contraction of the diaphragm and other muscles concerned in respiration. In uncomplicated Tetanus the circulation when not excited by

the intense action of the mus-
-cles, is often quite natural:
but as the muscular contract-
-ions always call for an expendi-
-ture of blood, the spasmodic par-
-oxysms increase the action of
the heart: and the intense ner-
-vous disorder makes it irregular
and inefficient: hence, in an ad-
vanced stage of the disease the
pulse is apt to be frequent, small,
irregular and feeble, more es-
pecially toward the close of
the disease when the heart is
exhausted by the combined in-
-fluence of intense stimulation
and defective nutrition. In the
most violent spasms the pulse
is very frequent:— a case is

mentioned in which it amounted to one hundred and eighty beats in the minute. During the exacerbations the Latin is precipitous copiously: The mind remains unaffected: coma, or delirium if they occur at all make their appearance only with the other indications of the failure of the powers of life. It is worthy of note that though the heart is exhausted by the violent throes, yet they are not followed by that feeling of fatigue which attends great muscular exertions under the influence of the will. Tetanus is divided into idiopathic and symptomatic. We recognize as idiopathic those cases occurring spontaneously, or after exposure to

cold, and independently of any other known pathological condition: and, as symptomatic those produced by some distinct affection existing within or without the spine; this, when originating in a wound or other external affection is termed traumatic. The cause of Tetanus is undoubtedly a particular predisposition, for we know that but few are attacked in ten, or to one in many exposed to the exciting causes: - in what this predisposition consists we are ignorant, but as we know the disease to be incontestably more frequent in tropical than in temperate or frigid regions, we conclude that heat affects more or less

-ally in forming it: and we know furthermore that exposure to cold supervening subsequently to the patient having been subjected to the predisposing effect of heat, has generally preceded the cases recorded. It is stated that after the battle of Muskaw, in the midst of very great heats, very few of the wounded French were affected with the disease, whereas the wounded in the battle of Dresden, when the weather was cold and wet, just after a very hot season, were decimated by the complaint, not even those who went through the operation of am-putation were spared. The disease may follow injuries in any part

and of any degree and extent, from a mere scratch or bruise to the tearing of a limb from the body. The appearance or state of the wound has little to do with the onset or continuance of the disease, the constitutional tendencies determine its whole course. To show how slight may be the injuries exciting this, how various in situation and kind Dr Watson educes the following:— It has been known to arise from the sticking of a fish-bone in the fauces: from a slight wound of the ear by a musket-shot: from the mere stroke of a whip-lash under they eye, although the skin was not broken: from cutting a corn: from a

bite on the finger by a tame sparrow: from a blow of a stick on the second hand: from the insertion of a seton: from the extraction of a tooth: from the injection of a hydrocele: from the operation of cupping. It is believed that punctured and lacerated wounds are those most apt to produce the disease, and that their situation influences the coming on of it, but this latter I very much doubt: I shall speak of this when considering the seat of the disease. The symptoms generally present themselves between the fourth and fourteenth days after exposure to the exciting cause, though in this there is no regularity: if the thin cuticle

passes without the disease becoming manifest, the patient may be considered safe: the greater the delay milder becomes the attack, and is generally more tractable. There is yet another division of Tetanus, a division with regard to severity and duration — acute and chronic. Sir Benjamin Brodie thus describes them:— The one running a short course, with strongly marked symptoms, and terminating fatally: the other of greater duration and milder form, and frequently recovered from. The disease is sometimes remittent, sometimes intermittent; this is almost always a favorable indication. In the acute form death may

take place in less than a day, or not until four or five have intervened. If the patient pass the eighth day his chance of recovery is increased, but he may die even though he has suffered on into the second or third week. Death takes place from asthenia, or from apnoea or from both combined. Recovery when it takes place does so slowly and gradually: the frequency of the exacerbations diminish, the continued contractions gradually become less: the muscles relax, and frequently the patient experiences a sense of formication. Complete recovery has occurred in five or six days, but generally it is much longer, and there is some inconvenience in the exercise

of the muscles for a [illegible] time after all other traces of the disease have gone. Pathological anatomy of Tetanus time is none. How then are we to judge of the essential nature of this fearful malady? I know not, unless we adopt the method of reasoning by analogy, and consider it a disorder of the excito-motory apparatus. Dr. Marshall Hall has successfully demonstrated that in a recently decapitated animal the Tetanic character of Tetanus may be produced by irritation of the Spinal Cord, and he concludes consequently upon this that Tetanus is dependent on Spinal irritation. Adopting this view, I can not understand [illegible]

a wound in one part of the body is more apt to produce the disease than one in another; unless indeed wounds in parts highly supplied with nerves are more liable to bring on the disorder, the sensation consequent upon the wound being communicated in greater degree and with greater rapidity; but those who claim for certain parts of the body decided susceptibility of the disease over the other portions, do not take these parts to be the most vascular and highly supplied with nerves. Tetanus more frequently supervenes upon wounds of the extremities, than those of the body, neck or head, simply because

wounds of the extremities are more common. The belief so generally held by the profession and by the people, that wounds of the back of the thumb and of the great toe are more apt to be followed by Tetanus than wounds in other parts is unquestionably correct; not on account of any peculiar sensibility of the parts, nor as some have enforced upon the involvement of the tendons in the wound, but upon the great frequency of occurrence of wounds in these parts, added to the fact that the wounds are generally of the punctured kind, which renders wounding of the larger nerves quite likely. That wounding of the tendons, which

abound here, does not increase the probability of the coming on of the disorder we may infer from the fact that it has never been known to occur from the ablation for tenotomy, so frequently performed upon the field.

The treatment of this malady may be both constitutional and local. The local treatment has for its object the removal of any inflammation or irritation that exists in the wound, affecting the general system. The division of the injured nerve, if there be one that has been punctured or lacerated, has occasionally proved successful. In those cases in which the digital nerve appears to have been injured, Liston

recommends the making of a
shaped incision down to the bone,
above the part, so as to insulate it
completely. In the constitutional
treatment it is necessary to bear in
mind that Tetanus is an affection
of debility, the violence of the spasmodic
symptoms falsely giving an appear-
-ance of strength to the patient, and
that the principal source of danger and
death is exhaustion induced by the energy
of the muscular movements and by
want of rest. The means adopted
should, therefore, have for their objec-
the removal of irritation and the
support of the patients strength, to
enable him to bear up against the
disease. The patient should be wa-
-tched, the greatest possible attention

being exercised to protect him from excitement of any kind. The most effectual means of allaying spinal irritation is that recommended by Dr Todd, the applying along the whole length of the spine of an ox's intestine filled with ice. Of sedative and anti-spasmodic remedies Chloroform is undoubtedly the best. In the more acute forms of this disease all remedies appear to fail, the patient being speedily destroyed by the disease. In the subacute or chronic varieties, where recovery takes place under the administration of some particular remedy, I am inclined to think the patient would have done equally well without such treatment, being generously supported. Beef-tea and wine should be exhibited, the powers of life supported until the disease expends itself.

An Inaugural Dissertation
on
Acute Laryngitis.
Submitted to the examination
of the
Provost Regents and
Faculty of Physic
of the
University of Maryland.
For the degree of
Doctor of Medicine
By
J. McKee Sullivan
of Ireland.

Acute Laryngitis presents several varieties, but they are all dependant upon the same Condition, viz: inflammation of the Mucous membrane of the Larynx.

This disease was known to the ancients for it is mentioned in the writings of Hippocrates; but it was not recognised as a distinct disease until Modern times, and the first Case in which it was clearly defined appears to have been that of Genl. Washington, which occured in the latter part of the Eighteenth Century.

The symptoms of Acute Phlegmonic Laryngitis as it attacks a healthy person, are that the patient after having been exposed to the exciting —

Cause is seized with a cough which
is at first slightly hoarse, but as the
disease advances becomes almost
inaudible. The voice, which from the
beginning is husky becomes reduced
to a whisper and at length entirely
suppressed. The throat is red and
swollen and causes when pressed
upon, considerable pain and distress
to the patient. The respirations are irre-
gular and sonorous; and the inspirations
are longer and more laborious than the
expirations. Conveying to the ear the sound
of air being forcibly driven through a
narrow passage. The lips and face are livid
and the Countenance presents,
altogether the appearance of the

intense suffering and anxiety. The patient starts from his bed [illegible] for breath with his mouth open as [illegible] immediate suffocation were about to take place. The impure blood [illegible] to circulate through the brain and system at large until the patient if he do not die from Asphyxia caused by the spasmodic contraction of the muscles of respiration closing the chink of the glottis, his life is put an end to by deep and profound Coma.

This active stage of the disease is attended with all the phenomena of acute inflammatory fever. This is generally the course the disease takes if prompt and immediate relief

releases the sufferer from his pain, or else, if the disease takes a favourable turn, Convalescence begins to take place.

Thus we have two sets of symptoms. local and general.

The danger of Laryngitis does not depend on the extent of the inflammation, but on the amount of the Effusion into the sub. mucous Cellular tissue around the Glottis, giving rise to the formation of false Membrane, or pseudo-membranious Laryngitis; the danger also depending upon Spasmodic Contraction of the Laryngeal — Muscles.

The diagnosis of this disease is of the utmost importance to the

Physician as his treatment is thereby to be guided. It is necessary that the Complaint should not be mistaken for diseases of the thorax which are often attended with dispnoea and present the ordinary Constitutional Symptoms of Laryngitis.

Other distinctive signs are, that in Laryngitis besides the disease being seated in the tissue of the Larynx, the loss of voice, the sensation as if a foreign body were present, the Cough, the seat of pain, the marked difference between inspiration and expiration and the local symptoms, make it a disease remarkably easy of recognition by the experienced and attentive Physician.

Aneurism of the Aorta by its pressing on the windpipe and causing dyspnoea has by some been mistaken for this malady; but the result of auscultation will make it quite obvious which of the two diseases the patient is labouring under. A boess near the Larynx may assume the character of Laryngitis. In one form of Croup also Laryngitis bears a striking resemblance.

Taking the various symptoms into consideration, it will be scarcely possible, if due pains be taken and proper examinations be made to mistake the nature of the disease for that of any other.

On examination after death the [illegible] membrane of the Larynx will be found gorged with blood thickened and softened

and the cellular tissue lying near to it distended with [illegible] [illegible] [illegible] [illegible] tumifaction of the Epiglottis and upper part of the Larynx. It [illegible] [illegible] [illegible] [illegible] Trachea but the lining membrane of that part is often found in a much higher degree of vascularity than natural.

The thickning near the Glottis is often so great as to entirely [illegible] the [illegible].

Ulceration is rarely met with in the acute form of Laryngitis.

The most frequent cause of this [illegible] and deadly malady in all its forms is believed to be exposure to cold or to cold and wet combined, when in a state of perspiration from heat or exercise.

In some persons there appears to exist a

[illegible] which may be considered as hereditary as it is found in those who from the slightest influence of cold are liable to contract Catarrh and other species of Angina. Too long and too great exertion of voice may produce it. Other causes, such as intemperance in the use of Alcoholic drinks; the effects of other diseases as Erysipelas, the sore throat of Scarlet fever, Measles, Catarrh and Small Pox.

Among the direct causes or those which produce direct injury to the Larynx itself may be noticed the swallowing of irritating and caustic fluids, as Nitric and Sulphuric Acid, the use of mustard as an Emetic, the swallowing of hot water, the inhalation of steam from the mouth of a tea kettle &c.

In regard to the age at which this disease is most apt to occur it may with great confidence be said that it is essentially a disease of adult life; children are rarely or never affected.

In speaking of the Prognosis of Laryngitis, little need be said, other than that it is so extremely fatal that about four fifths of all those who are attacked with it are destroyed. It may however present itself in a mild form and be recovered from; but it is almost universally a disease of great violence, and always attended with extreme danger to life.

Its average duration is from three to five days, and it has proved fatal in

so short a time as twelve hours, from the first uneasy sensation of the patient giving warning of its approach.

The indications for the treatment of Laryngitis are threefold. First, to subdue the inflammation and to prevent the pouring out of its products.

Second, to open the Trachea when these products have been poured out.

Third, to promote the absorption of the effused fluids.

For accomplishing the first, and most important of these indications, the subduing of the inflammation and the preventing of effusion by far the greatest and most important remedies are blood-letting and Mercury.

The prompt and decided use of the lancet is required in order to obtain the full benefit of the remedy. The patient should be placed in the erect or semi erect position. The vessel should then be opened and the blood be permitted to flow until a decided impression on the pulse is produced, as indicated by the signs of approaching syncope, which is an evidence that the remedy has had the desired effect upon the system. The bleeding should be repeated as often as the urgency of the symptoms may require, or the strength of the patient will allow.

Calomel, the most efficient remedy next to blood letting on account of its antiphlogestic power should be given

from the beginning of the disease in connection with that agent. It should be given in doses of four or five grains, repeated every three or four hours until the gums become slightly tender: when it should be withdrawn until the tenderness of the gums subsides: it should then be again resumed if the severity of the case demand it or, what is perhaps a better mode of exhibiting it, we may give it in doses of one tenth of a grain every ten minutes, as it has been found to produce its specific effect when given in this manner more promptly than when given in longer doses.

If the mercurial should act too freely on the bowels, we may combine it with a quarter or half a grain of opium.

In order to assist the opperation of the Mercurial, we may put in half a drachm of the Mercurial ointment, which if necessary should be repeated.

Emetics may be given in the first stage of the disease with considerable advantage, but in the more advanced stages they become very objectionable on account of the danger of the contents of the Stomach being thrown into the air passages, thereby causing Spasm of the muscles, which increases the violence of the disease, and the immediate death of the patient may ensue from suffocation, caused by the spasmodic closure of the Glottis.

Blisters to the throat have been recommended on account of their revulsive

[illegible] but they are objectionable from [illegible]
[illegible]
in the way when the Surgical operation
becomes necessary. They may however
be of some advantage and when used
[illegible]
[illegible] Sternum or between the Scapulae.
The employment of Leeches and Cupping
[illegible] attended with some benefit.
Tobacco has been used in the form of
poultice and strongly recommend by
[illegible]
[illegible] or Acute Stage.
Purging has been suggested but it
is a dangerous [illegible]
the [illegible]
If the treatment alluded to fail,

[illegible] will become absolutely necessary to [illegible] order to deliver the patient from inevitable death.

[illegible] recommended by Prof. Samuel Chew, [illegible] in Europe. It consists in the introduction into the posterior fauces of a guarded bistoury, by means of which incisions are to be made around the edges of the Glottis and Epiglottis. It is an operation very simple in its character, and one which every Physician can perform with ease.

But the greatest and most effectual [illegible] operation either [illegible]

Laryngotomy, the former of these is on [illegible]

[illegible]

indications in regard to it is, that it should not be too long delayed, for if we wait until the face becomes lived and the extremities cold, it will then become almost utterly of no avail.

As soon therefore as the antiphlogistic powers of bloodletting and Mercury fail in a [illegible] of the symptoms of the disease and we have evidence of the non-decarbonization of blood the operation should be at [illegible]

[illegible]

performed, a bent silver cannula should be [illegible]

that the respiratory function may be with more facility carried on.

When the Trachea has become obstructed with mucus, the patient may be directed to take a full inspiration and to place his finger over the hole in the tube then to make a forcible expiration [illegible]

We must be careful to bear in mind that the disease is not cured when we have opened the Trachea and have relived the patient from the most urgent symptoms, but must persevere in the use of those remedial agents best calculated to promote the absorption of the effused fluids.

Inaugural Dissertation

on

Gonorrhea

and its [illegible]

Complications

submitted

to the [illegible]

of the

Trustees, Regents and Faculty of Medicine

of the

University of Maryland

for

the degree of Doctor of Medicine

by

William B. Coles

of Maryland

Gonorrhœa is a term derived from two greek words, γονη, semen and ρεω to flow; which when literally translated is an involuntary discharge of semen, but when employed by surgeons it is used to indicate a discharge of purulent matter, most commonly from the urethra; but also from other mucous membranes, as the prepuce and glans of the male, and the vagina, labia, nymphæ and clitoris of the female.

Doctor Swediaur, who objected to the term Gonorrhea being applied to this disease, proposed that of Blenorrhagia, which is derived from βλεννα, mucus and ρεω to flow, but it has been discovered by aid of the microscope, that the discharge is in truth not one of mucus but of pus, having no essential difference from the pus which is effused from an ulcer.

Consequently, the term Blenorrhagia is subjected to the same objection as that of Gonorrhea, and as the latter term was first applied to it, there can be no plausible reason for changing it.

Previous to the year 1753 it was generally thought that the discharge

from the urethra was produced by ulcers in its course, but about that period it was satisfactorily shown, that pus might be secreted without any breach of substance. Hunter proved by examining the urethras of malefactors and of those who at the time of their death were affected with Gonorrhea, that the course of the urethra was entirely free from ulcers. The poison of Gonorrhea differs from that of Syphilis, as has been fully shown by the unerring test of inoculation; these affections not being able to reproduce one another under any circumstances.

The causes which give rise to Gonorrhea may be classed under three separate heads, viz; Physical, Chemical and Pathological causes. A Physical cause is any local lesion applied to the genital organs, as the introduction of a bougie, passage of gravel along the urethra, riding on horseback &c.

By a Chemical cause is meant one which produces great irritation and inflammation of the part to which it is applied, as the cantharides and the internal administration of Turpentine and Cantharides.

A Pathological cause is that peculiar animal poison which is

received from the genitals of the opposite sex in the act of coition. Any discharge from the genitals of the female will give origin to the disease, as Leucorrhea, the menses &c. Professor Hammond mentions a case which came to his knowledge, the patient being a married man for which no other cause could be assigned, than the unclean condition of the genitals organs of his wife.

Gonorrhea like the majority of inflammatory affections may be divided into acute and Chronic, of the latter form I shall treat under the head of Gleet.

The Acute form of Gonorrhea I shall divide into two stages. 1st. The incubative stage or period of irritation; 2nd. The Acute inflammatory stage.

The first stage or that of irritation, usually makes its appearance from three to five days after sexual congress, the patients attention is attracted by experiencing some degree of heat, itching, and general irritation about the parts. The lips of the urethra are somewhat red, swollen and gaping, if the urethra

is compressed a small quantity of muco-pus will exude. The urine on account of this effusion of pus, is passed in a fine spiral or forked stream; and it is also sometimes passed in jerks produced by spasm. Having lasted for twenty four or forty eight hours, it merges into the second stage which is one of active inflammation.

The discharge at this time becomes more abundant, thick, and of a greenish-yellow color; there is also great pain in passing water, attended with heat and smarting. The urethra is swollen, and feels firm and cord-like to the touch, and the whole penis appears red and turgescent. Should the disease extend to the bulbous portion of the urethra, the patient will complain of a weight in the perineum; if the prostatic portion is the seat of disease, there will be felt heat and weight about the anus. During the whole of this period there is general constitutional disturbance and pyrexia. Chordee, which is one of the most aggravating symptoms in this stage of the complaint, consists in highly painful erections,

usually occuring at night, with a twist of the penis which is generally curved downwards towards the scrotum.

Treatment.

The treatment of Gonorrhea must be conducted with reference to the stage which the disease has reached, but especially with regard to the amount of inflammatory action accompanying it. It has been proposed to adopt what has been termed the abortive treatment, that is, during the earliest stages. This method consists in the injection of strong solutions of Nitrate of Silver into the urethra, in the proportions of fifteen to twenty grains to the ℥j of water, though some surgeons have injected so large a quantity as forty grains, but all the advantage that can be attained may be derived from weaker solutions. Another method of using Nitrate of Silver, is to apply it to the inflammed urethra in the form of an ointment, smeared on a bougie. Before using the injection, the urethra should be well cleansed out with cold water, then the injection in the proportions cho-

sen should be thrown into the urethra and retained there by means of pressure over the orifice for one or two minutes, if the fluid should be allowed to escape it would be nearly impossible to inject because of the great swelling which immediately ensues, it is expedient for this reason to direct your patient to pass his water previous to using the injection, otherwise he will subject himself to great pain as it is generally some hours before the inflammation subsides. Generally, the escape of the injection from the urethra is immediately followed by the discharge of a quantity of blood of which the patient should be made aware, otherwise he may be considerably alarmed. In the hands of some surgeons this mode of treatment has proved very successful, although the majority of surgeons repudiate it. If I should meet with a case of Gonorrhea in the earliest stages, I would earnestly advise him to give this plan a trial.

When you see the patient in the later stages or have tried the

abortive plan and it has failed, a different manner of treatment must be instituted, this may be of two kinds, the rational and the specific or empirical.

In the acute inflammatory stage attended by heat, swelling of the organ, and/or urinary and abundant discharge, the treatment must be strictly antiphlogistic, the activity of the measures being proportioned to the intensity of the symptoms. If the inflammation be very severe, leeches may be applied to the perineum or to any tender portion of the urethra, in mild cases hot hip fomentations and warm water dressings to the penis may be serviceable. At the same time the urine should be diluted by alkaline agents, a very good formula is that of Barley water containing a little carbonate of Potassa. The skin should be made to act by the administration of diaphoretics and the bowels kept open by mild aperients. The patient should avoid all stimulants and his diet should be of the lightest character. By the use of such means as I have just mentioned, the

activity of the inflammation will decrease, the discharge become thinner, and the erections less painful.

After the inflammatory symptoms have in some measure subsided, it is generally advisable to commence with the specific treatment, which if it were had recourse to in the earlier stages, would certainly increase the inflammatory action and cause the patient much distress. Among the specifics or the empirical agents, Copaiba and Cubebs are the two which are most commonly employed, of these Copaiba is the least irritating, and for that reason is generally preferred. It may be administered in a variety of ways, as in capsule, with, draught and extract.

It is generally used in the form of capsule on account of the taste being so readily disguised, it may be very efficaciously administered by dropping it on mint-water, upon which it readily floats in the form of a globule.

When the capsules are administered, the patient may take from six to eight a day, the dose of the oil is a drachm three or four times a day.

The other remedy which is named, Cubebs, has also been used very extensively in this disease, this drug has proved more efficacious in broken-down constitutions after frequent slaps, and where Copaiba has been tried with no effect. It is employed in the same doses as Copaiba and is used in the form of powder. The best mode, to my mind, of administering it, is to mix the two drugs together so as to form a thick paste then adding a sufficient quantity of Magnesia to form an electuary.

It is during this, the second stage of Gonorrhea, that injections are most satisfactorily employed although it has been thought by some surgeons unsafe to apply local applications to an inflamed urethra, as it was supposed they increased the tendency to stricture and orchitis; but these affections

are in the majority of cases, owing to the long continuance and severity of the desease itself or to the too early application of the injection.

The injections that are most generally used are of an emollient and astringent character, among the best is that of the acetate of lead in the proportions of two grains to the ounce of water, if this should cause undue irritation, a few grains of the watery extract of Opium may be added. As the acute symptoms subside stronger astringents must be employed, as the acetate and sulphate of Zinc or nitrate of Silver in the proportion of a quater of a grain to the ounce of water. During the whole of this stage the diet and habits of the individual should be attended to, and it is necessary that the injections should be discontinued as soon as the discharge ceases, otherwise they may cause it to return.

Having spoken of the acute inflammation stage and its treatment, I shall now proceed to give an account of the chronic form of Gonorrhea or what is most commonly known as Gleet.

When Gonorrhea has reached this stage it is most difficult to effect a cure, indeed it has been styled by some, ~~surgeons~~ "the opprobium of Surgery". It will very often elude every mode of treatment and at last by some unknown cause or accidental modification of the constitution will be permanently cured. A Gonorrhea is called a Gleet, when it has been prolonged some time after the acute symptoms have subsided or when they have assumed a chronic form. The mucus membrane of the urethra presents an altered condition and sometimes small ulcerations are met with in its posterior portion, these ulcerations very often in the process of cicatrization give rise to stricture of

which I shall speak more at length elsewhere.
The discharge in this form of the disease gradually becomes thinner in character and assumes the appearance of mucus, it is also less in quantity. Often when the affection is apparently cured the slightest excess at the table, the drinking of malt liquors or effervescing wines will reproduce the discharge.
It is especially difficult of cure in those persons of relaxed and debilitated constitutions, depending on or on Scrofula, Gout or Rheumatism.
The treatment in these cases should be addressed more particularly to the constitution, the diet should be of a non-stimulating character, change of air, sea-bathing will be of great service. The preparations of Iron should be administered and Copaiba with Cubebs, either seperately or in the form of an electuary may be used with marked advantage.

Injections are also of the greatest service, particularly those of Sulphate of Zinc and Nitrate of Silver, I have found the following formula used as an injection to prove very efficacious; ℞.

Zinci Sulphas. ʒß

Morphiae Sulphas. grs j

Aquae. ℥vij M.

S. To be injected six times a day.

It would be very well to vary the injections, as the mucus membrane after a time becomes accostomed to the same stimulant which if it be continued, might produce a bad, certainly no good effect.

Complications.

Among the first complications we meet with of Gonorrhea is one I have already mentioned, that of inflammatory stricture which is a variety of the spasmodic form. The inflammation in the first stages is generally confined

to the fossa navicularis there is great discomfort and tenderness in the perineum and if the patient should attempt to urinate he experiences great pain, this produces a kind of spasm indicated by the manner in which the urine passes from him, as it is generally passed in jerks.

The treatment of this complication must be of the ordinary antiphlogistic mode. Leeches may be applied to the perineum or along the course of the urethra. In patients of an inflammatory habit general bleeding may cause great relief, belladonna smeared over the perineum will very often alleviate the symptoms. When there is some degree of permanent stricture, which is exceedingly irritable, and liable to frequent spasm; a slight touch with the caustic bougie sometimes produces immediate relief. Cold is another and one of the most efficient means we can employ to re-

leive congestion and thereby to alleviate all inflammatory symptoms. The bladder should be relieved as soon as possible by means of a catheter and if the patient has been indulging at the table a purgative may be given.

A second form of desease consequent on Gonorrhea is where the inflammation extends to the glans, causing what is termed Balanitis from βαλανος, glans. When the inflammation attacks the prepuce it becomes Balanoposthitis. It is produced by the Gonorrheal virus and generally affects uncleanly persons and those who have a long prepuce. This affection may be mistaken for chancre but it will readily be distinguished by the thick, purulent discharge and the superficiality of the excoriations, which characterize Balanitis. It is treated on general antiphlogistic principles, the administration of a saline aperient and the application of a lotion of Acetate of Lead or lime water will effect a cure.

If this should prove ineffectual the inflamed surfaces may be touched with the solid stick of Nitrate of Silver.

The next complication concerning which I shall speak is known as Phymosis, here, there is a preternatural constriction and elongation of the prepuce, so that the glans cannot be uncovered. It may be congenital as well as acquired. In some cases the inflammation is so great that lymph is effused constituting solid oedema.

The treatment in this form of Phymosis, that is, where it is acquired and not congenital, must be conducted in relation to its cause; if following inflammation that must be subdued, when perhaps the elongation and contraction will subside. If however the Phymosis be permanent in character an operation will be necessary.

This may be conducted in two modes; the elongated and contracted prepuce may be slit up and the constriction thus immediately obviated, or circumcision may be performed. The former of these I believe to be the best procedure, although at first it presents rather an uncouth appearance; it is conducted in the following manner, a grooved director is to be passed between the prepuce and the glans on the under surface near the frænum, along this the surgeon glides a straight sharp-pointed bistoury, pierces the prepuce, and divides it from within outwards to its free border. The mucus membrane is found divided to a less extent than the skin, and requires to be opened further with the scissors. If the wound which results be thought too large, it may be diminished by stitching together the edges of the skin and mucus membrane. It may be dressed with Olive

Oil or if there be much inflammation resulting, cold may be applied. This procedure is known as Velpeau's operation, and is the one prefered by Prof. N. Bo. Smith.

Paraphymosis, another affection occuring as a sequence of Gonorrhea, differs from Phymosis in the prepuce being forced back behind the glans, producing strangulation of that organ from the pressure exercised by the preputial orifice. This is especially apt to occur in those individuals who have tight prepuces, and who on uncovering the glans find it difficult to place the prepuce in its proper position again. The constricted glans speedily swells from the congestion produced and thus adds to the difficulty in replacing the prepuce.

In the treatment of this condition the surgeon should first endeavour to reduce the swollen organ, that

may be accomplished by seizing the body of the penis between the index and middle fingers of both hands, drawing forwards the prepuce, and at the same time he proceeds to reduce the swollen glans, by pressing on it with his thumbs and thus forcing it back.

Should this procedure prove fruitless, reduction may be accomplished by dividing the constricted and strangulating preputial orifice.

Sometimes nature comes to the rescue of the surgeon, and causes ulceration of the parts from loss of vitality, and thus effects a cure. It may be observed here that it is never the constricted glans, but the constricting prepuce that ulcerates.

I shall now proceed to treat of the two last and most important complications concerning which I have written; viz, Orchitis and Epididymatis.

Orchitis or inflammation of the body of the testicle

may be caused by local violence, but it more frequently occurs in conjunction with Gonorrhea through the extension of inflammation from the urethra, it may also be produced by the abuse of injections. When it occurs as an sequence of Gonorrhea it is in all probability a species of constitutional affection intimately connected with inflammation of the fibrous tissues. It is characterized by a decrease in quantity of the discharge from the urethra, most severe and excruciating pain and tenderness of the part, of the organ on pressure. The spermatic cord and especially the vas deferens, are often thickened, and sore to the touch. There is usually swelling and redness of the scrotum, with a turgescent state of the scrotal veins, dyspepsia and occasional vomiting. The severe pain which is experienced is probably owing to the involving fibrous tissue

preventing expansion of the organ. The testicle always suppurates in Orchitis because of this pressure.

The treatment in this disease must be essentially antiphlogistic. Blood may be extracted from the part by puncturing the veins of the scrotum. This is a far better method than applying leeches, the bites of which are liable to become irritated. To accomplish this effectually, the surgeon should direct the patient to stand up and to foment the scrotum for a few minutes with a hot sponge, so as to distend the veins. These may be then punctured at various points with a fine lancet, and the parts well fomented afterwards, so as to encourage the flow of blood. The patient should be kept in bed with

the labia raised by means of a small pillow placed between the thighs or what is better a thin piece of board, notched in the middle so as to pass beneath the labia and rest on the thighs. Soft-ing fomentations or lotions of Goulard's Extract should be applied. If there should be much effusion into the tunica vaginalis, relief may be afforded by puncturing this sac with the lancet.

The constitutional treatment during the acute stage consists in the administration of purgatives, calomel, antimony, opium or hyoscyamus. After the acute stage has subsided, strong astringent lotions may be used and afterwards friction with mercurial ointment, so as to remove the swelling and hardness which generally remains after an acute

attack. Compression by means of adhesive strips has been recommended, it is to be employed immediately after the very acute stage has subsided. The affected testicle is grasped and separated from its fellow, and then is encircled with longitudinal and circular strips of adhesive plaster; which are to be applied regularly and with sufficient tightness to cause some uneasiness at first; this, however, ought soon to subside.

In epididymitis the body of the testis is not inflamed, only the epididymis, although the testis may be affected secondarily.

The patient feels pain on moving his legs and along the inguinal canal, there is also a sense of weight in the testis. The epididymis may be felt at the posterior

portion of the testis, perfectly circumscribed and well defined. It is very tender on pressure, and occurs only when the discharge has ceased or diminished.

In the treatment of Epididymitis, the bowels should be kept open, the scrotum elevated by means of the notched board, and the local application of lotions of Goulard's extract or warm fomentations if more agreeable to the patient.—

Baltimore Infirmary.
February 4th 1861.

An
Inaugural Dissertation
on Diabetis
Submitted to the examination
of the
Provost, Regent, and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine

By

A. H. Price

of
Maryland

1861

Diabetis was known to the ancient Roman Physicians; but it does not appear that they had any knowledge of the essential characteristics of the disease, that is its saccharine character, They merely considered it an increased evacuation from the kidneys, of fluids taken into the stomach, without having undergone any change while in that viscus; and it was not until 1684 that the true saccharine nature of Diabetic urine was first discovered by Dr Willis

Diabetis, then, may be considered as an inordinate flow of urine highly charged with saccharine matter, and and it appears to consist essentially in the formation and expulsion of sugar. The excessive discharge

being merely accidental or secondary.

Symptoms – Diabetis generally makes its appearance in a very gradual manner. The approach of this disease is, however occasionally sudden, when this is the case, it is usually preceded by slight chills and febrile disturbance. When its invasion is gradual the first indication which attracts the attention of the patient, is the frequency of his calls to evacuate the bladder and the great amount passed during the day. A dry clammy state of the mouth and fauces is also observable whilst the tongue is furred in the middle and red about its tip and edges being, at other times, red and smooth

over its whole surface, The skin is hot, dry and rough (caused by suspended action in the cappilaries of the skin) The bowels are irregular in their movements but are, gennerally consti-constipated, which is very readily accounted for, It is attended with a dull, aching pain in the back, loins and lower extremities; a sense of langour and lassitude, and indisposition to bodily or mental exertion, The appetite is sometimes much greater than in health. The impaired diges-tion, consequent upon this disease produ-ces uneasiness in the stomach after meals with flatulence, sour eructations feelings of weight or oppression in the eppigastrium, with a burning sensation about the Precordia.

As the disease advances, the discharge of urine is increased, the craving for drink becomes insatiable, attended with great emaciation of the body. The amount of urine discharged, varies very much in different cases, and may be considered a very good index of the severity of the disease. From ten to twenty pints are usually passed daily. The largest quantity which I have seen recorded as having been eliminated in the twenty four hours was fourty pints, and this average is sustained for weeks and months together: It is a remarkable fact that it sometimes exceeds the whole amount of ingesta, including solid and fluid, even though to the weight of the latter, the loss of

weight by the body be added. This dif-
-ence is accounted for by absorption from
the atmosphere through the lungs, or skin
or both. The secretion of so much urine
is almost necessarily attended with a
frequent desire to void it and the
patient is obliged to rise several
times during the night for this purpose,
not withstanding the amount of food
consumed, it produces no increase of
flesh, but on the contrary a gradual
progressive emaciation, attended with
increasing debility, both of body and
mind. The lungs and surface are
said to exhale a sweetish odour, also the
purpuracious scales on the extremities
have a similar taste, the gums are
often swelled, tender and red, occasionally
ulcerated. Phymosis and excoriations

on the Penis are frequently observed, together with a burning sensation along the urinary passages. The urine in diabetis is of a pale straw colour emitting a faint sweetish odour compared to that of hay or new milk. It would appear, from the amount of urine passed, that its density must necessarily be diminished, but chemical analysis proves to the contrary, if the whole amount voided in the twenty four hours be taken into consideration. The average specific gravity being about 1.040. The urea is often increased beyond the healthy standard, While the uric acid is said to be almost invariably deficient. To account for the increased density we must, therefore ascribe it to the pre-

-ence of a new ingredient. This is Sugar of the variety known to Chemists by the name of glucose or grape sugar

Of the various tests employed to detect the presense of sugar in the urine there are but two that it is important to mention the first of these is based upon the principle that Diabetic urine, like other liquids containing sugar is capable of undergoing the vinous fermentation, by the addition of yeast, and at a suitable temperature. No such change takes place in healthy urine under similar circumstances. To test the urine by this method all that is requisite is, to add the yeast and expose it to a temperature of about 70 or 80° F. if it be diabetic, effervesence will speedily

ensue, gas passes over and the liquor will possess a nitrous odor. The latter and probably the best is Trommer's test, it consists in adding enough solution of sulphate of copper to the suspected urine to give it a faint blue colour, a little phosphate of copper generally falls, then add solution of potassa in excess, the oxide of copper precipitated at first is redissolved in the excess of the alkali producing the peculiar blue of ammoniated copper. If the liquid be now gently heated a red suboxide of copper falls, if sugar is present

As this disease advances serious organic disturbances are apt to be set up, Tubercles are developed in the lungs attended with their pe-

-cular symptoms, such as cough dyspnea an uneasiness in the chest with purulent expectoration. Brights disease, is apt to make its appearance which is indicated by the presence of albumen The brain becomes more or less affected, Head ache, vertigo and temporary delirium occur, and when it proves fatal the patient dies apoplectic or comatose. The duration of Diabetis is exceedingly various sometimes running its whole course in a very short time, & in the majority of cases it may be said to last for years and ultimately wear out the constitution, Not unfrequently it would seem that the disease had entirely ceased either spontaneously or under the influence of remedial agents and

then recur with increased violence. The patient may be carried off at any time during the disease from some organic affection of one or other of the internal organs and that most frequently occurs in the lungs, setting up Phisis, Not unfrequently Brights disease of the kidneys as is shown ~~by~~ by the albuminous impregnation of the urine," causes which in health would but slightly disturb the system result fatally when brought to bear upon it when suffering under the influence of this disease, Sometimes we are warned of the approach of dissolution by dropsical effusion or colliquative diarrhea. Exhaustion or debility from excessive discharge, want of a sufficiency of suitable food or too great a supply of nourishment

have each and all in certain cases caused death, the latter, by undue embarassment of the vital processes, certain cases of this disease have been known to run their course in a short time resulting in death in a few weeks or even a few days. But, the disease is generally considered Chronic

Dissection although pursued with great care and practiced with diligence has revealed nothing that would throw any light on the true nature of the disease, except that it is not necessarily connected with any organic lesion, and is, therefore, in all probability purely functional, The kidneys frequently exhibit marks of increased vascularity and are often found enlarged and flabby. In numerous cases the lungs

are found to be diseased, and it is asserted by some Authors that this is invariably so. The cellular membrane surrounding the kidneys, that of the abdominal parietes, and other parts of the body are frequently loaded with a gelatinous substance, The mesenteric glands are occasionally enlarged. The bladder is sometimes increased in size Thickened and indurated The stomach very often shows signs of a morbid condition.

The excessive discharge of urine in Diabetis cannot be considered the disease itself but only the effect of a pathological condition on which the disease depends. The generation of sugar then is certainly the main character of the affection. For the true seat of the

disorder, then, whereunto to look? That it is not produced in the kidneys, we have abundant proof; for it is well known that those great emunctories of the body are better adapted to the seppa-ration of foreign matters than they are of producing them. This principle is merely sepparated from the blood by the action of the kidneys. It is not only by these organs that it escapes. It has been detected in the saliva and also in expectorated matter. As was stated before, Patients are said often to have a sweet taste in the mouth; and the odour of their breath and that exhaled from the surface of the body, are other evidences of the same kind. Sugar has been shown to exist in the blood, which may be

easily demonstrated by the application of Trommers test. Bouchardat ascertained that little or no glocose is to be found in the blood in the morning, because all that was derived from the last meal had passed by urine in the night; and it probably sometimes fails to be detected, because it is rapidly converted into lactic acid after the blood has been drawn.

For a long time the presence of sugar in the serum of the blood failed to be detected owing to the fact that the least quantity of this noxious matter in the circulation becomes offensive to the constitution and is therefore thrown off as soon as it enters it and in consequence of its having failed to be detected in this fluid

gave rise to the belief most probably that Diabetis depended on a primary affection of the kidneys. but it has been proven that it does not depend on a perverted action of these organs, Although this saccharine matter has been discovered in the serum of the blood in Diabetic patients, from the experiments of Mr Gregor. I think it will be necessary for us to go back a step or too farther in order to ascertain the source of sugar.

It has been shown by that gentleman that it is generated in the stomach during chymification. This change is probably owing to the presence of some matter secreted with the gastric fluids which disposes to the formation of sugar

The sugar thus formed passes into the duodenum eluding the vigilance

of assimilation in the small intestines; is then taken up by the chyliferous vessels, conveyed to the circulation and there, mixes with the blood, thereby stimulating the kidneys to increased action and is then thrown off with an excessive amount of other constituents of the blood "Which the renal functions occupied as it is by its great duty of eliminating foreign matter fails to seperate. The vast amount of matter discharged both solid and fluid induces thirst and hunger, which, by leading to distension of stomach increase, probably the original digestive disorder. The impoverished condition of the blood produces organic derangements, such as tuberculous deposits in the lungs,

and granular degeneration in the kidneys
At length the renal functions become exhausted; the urine ceases to be secreted effete matters accumulate in the circulation; and if life has not fled by some one of the numerous channels before opened, it goes at last through the brain, which is paralyzed by the depraved or poisoned condition of the blood

Our knowledge concerning the cause of Diabetis is at present rather obscure, It is observed in all ranks of society. No employment or profession can be stated as particularly liable to, or exempt from it. It is met with in both sexes, and at various ages; but it chiefly prevails among men, and in the middle or advanced periods of life. But it may be admitted that

hereditary tendencies and certain conditions of the constitution, natural or acquired may predispose to this disease; and there are many instances on record, which go to prove that this predisposition is sometimes hereditary. It is said that Dr Parish attended a young man in this disease whose mother and sister died of the same complaint. Dyspeptic affections long continued may perhaps act as a predisposition to Diabetis. A residence in cold damp and miasmatic districts, renewed excesses or an impoverished diet may place the system in a condition favourable to its development

It is thought to be generally connected with a strumous constitution Those whose digestive organs are

unusually active, and who indulge freely in the pleasures of the table, are most liable to this malady. The free and habitual use of condiments, and of vegetable articles of diet especially the farinaceous substances appear to favour the occurence of this disease in an especial manner. That the habitual or frequent use of diuretic and spirituous potations, should have a tendency to produce Diabetis in persons who are naturally predisposed to it, can scarcely be doubted. Diabetis has been known to occur sympathetically from pregnancy. A remarkable case of this case kind is related, in which, during five successive pregnancies, and throughout the whole of each period the diabetic symptoms were very conspicuous.

The quantity of urine discharged was exceedingly great, and on being analysed, it was found to contain no inconsiderable portion of saccharine matter. The thirst was exceedingly urgent, but the appetite and digestive powers remained regular, and rather active.

Blows or other violence about the loins, anxiety or grief, repeled cutaneous eruptions, rheumatism or gout, may under favourable circumstances set up the disease.

The prognosis in this disease is generally unfavourable. And the recovery of the patient, even under the most favourable circumstances is tedious. When the disease is submitted to treatment

in its earlier stages there may be some hope of a permanent cure but in the majority of cases relief is but temporary. While we admit that permanent cures are seldom affected yet much may be done towards moderating the symptoms and prolonging the life of the patient,

Of the three important objects which should never be lost sight of in the treatment of Diabetis the one of paramount consideration is "To restore the proper tone of the digestive apparatus by such treatment as will effect the restoration of the defective powers of the stomach and liver; secondly, Every precaution should be taken to entirely prevent or restrict the introduction of foreign saccharine matter into the system

and hardly; To relieve the most distressing symptoms

When we reflect, that every particle of matter that enters into the composition of our bodies, whether it goes to the formation of bone or cartilage, muscle or nerve, whether its destination be to the heart, whence it is sent on its vitalising mission to the remotest parts of our system, the pancreas or the Alimentary canal, When I say we reflect that all these various supplies, elaborated from such a variety of materials must first be brought under the influence of that great Solvent of all Solvents the Gastric Juice we cannot but be convinced of the importance of preserving its purity, or be surprised at

the sad results of its becoming enfeebled

Nor while we contemplate the unfortunate results of its derangement should we be astonished by the fact. God has not constituted the body, or any of the animal functions for eter-nity, it being a part of his economy, that continued and particularly improper use of them should finally result in their deterioration derangement and distruc-tion

This fluid, in Diabetis is supposed to be diluted by, or mixed with a substance which, during the process of dijestion, tends to the formation of saccharine matter

Where the disease is caused by this enfeebled state of the dijestive apparatus it, at once, strikes every

reflecting mind that such treatment is necessary as will soonest and most effectually restore the stomach to a healthy state, and the Gastric fluids to its formative purity. This is sometimes effected by the judicious use of tonics, such as Quinia and the Chalybeates, These may be resorted to when there is no evidence of vascular irritation or inflamation. The preparations of Iron are probably the best, such should be selected as seem best to agree with the stomach, The pill of the carbonate of iron, the Chlorinated tincture or the Iodide of iron usually answers well

Gastric derangements is sometimes removed by the use of emetics, constipation should be constantly guar-

-ded against: for this purpose Rhubarb or the compound extract of Colocynth should be administered, effectual and saline purga-tives are objectionable, Many cases are said to have been cured by magnesia and carbonate of amonia. The magnesia may be given in the dose of two drahms daily. Five grains is the usu-al dose of the amonia and gradually increased, The use of lime water is also applicable under certain circum-stances. To be effectual the alkaline plan must be persevered in for weeks or months

In order to prevent the intro-duction of saccharine matter into the stomach it is absolutely necessary to diet the Patient. Animal diet is preferable to vegetable as the latter

is subject to the saccharine fermen-
-tation; salt meat as it is liable
to produce thirst is improper. He
should endeavor to vary the animal
diet as much as possible: allowing
the patient the privilege of select-
-ing for himself the different kinds
of meat, game, poultry, fish, and eggs,
in their different modes of preparation
to these may be added such vega-
-tables which are less liable to produce
saccharine matters in the system such
as spinach cabbage celery lettuce water-
cress and the young tops of the radish
and turnip

It is necessary that the quantity of
food and drink should be taken in
moderate limits, so as not to weaken
or irritate the stomach by over disten-

-sion. The urgent sensation of thirst may be relieved by the use of distilled water, acidulated with phosphoric or carbonic acid.

Bread made from wheat flour is unsuitable diet. The wheat being composed entirely of Gluten and starch, the latter differs from sugar only in containing a little less hydrogen and Oxygen in proportion to the carbon and is very easily converted into it by the addition of an acid but in what manner the acid acts to produce this change is not known. The principle starches are Arrow Root, Potato starch sago and tapioca and should all be avoided. Gluten the other constituent of wheat may be used, It is obtained from wheat flour, by forming it into a paste with cold water and continuing to wash the paste under

a stream of the same fluid as long as any thing is carried away. The remaining substance, Gluten, is of a grey colour insol-uble in water and alchahol, but it is soluble in alkalies and acids. Wheat flour owes its nourishing powers to Gluten, in fact it is the most nu-tritious of all vegatable substances It is necessary that one sixth of its weight of wheat flour should be added to it, in order that it may be made into light bread. The benefit of coffee and tea, is doubtful

Opium, in this disease is an inval-uable remidy. Besides its tendency to diminish the inordinate secretion of urine, it is particularly useful in subduing nervous irritability which in most cases becomes so distressing

in this affection. Dr Warren was one of the first who employed this narcotic extensively in this disease, it may be given in the dose of from half grain to a grain either by itself or in combination with uva ursa and lime water three or four times daily. It is of importance, when the patient is put on the use of this narcotic, to keep his system constantly and freely equally under its influence.

We should also excite a healthy action in the skin, and restore, if possible, the perspiratory function, For this purpose the patient should wear flannel next the skin, apply friction by means of the flesh brush, The hot air bath has been used with advantage to fill the same indication,

and by the employment of diaphoretics. The best of which is Dovers powder, it may be given in from five to eight grain doses every four hours. Alum whey made by boiling a drachm of alum in a pint of milk has been used, with very decided benefit.

Painful symptoms should be treated promptly as they may arise, counter irritants, should be applied to the epigastrium, when the stomach is tender or painful, or in cases of nephritic inflamation, to the loins

On

Inaugural Dissertation

on

Catheterism

Submitted to the Examination

of the

Provost Regents and Faculty of Physic

of the

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for the

Degree of

Doctor of Medicine

by

Alan P. Smith.

of

Maryland

MDCCCLXI

Catheterism

The subject we are about to consider is one of immense practical importance, and yet is one which is greatly neglected. Cases in which the most agonizing pain is experienced caused by an over distended bladder, are not by any means of uncommon occurrence. In these cases our immediate resort is to the catheter, and most beautifully does this instrument respond to the indication, when guided by a skilful hand. Like the charmed potion of the romance its action is instantaneous and the relief immediate, all present peril is averted and our patient after passing hours of distressing pain sinks into a quiet and refreshing sleep. But suppose a case of more than ordinary difficulty, complicated perhaps with structure or enlarged prostate, to have fallen into the hands of some awkward and inexperienced surgeon, in speaking of an instance of this character.

Says Dr Gross: "The moment the catheter is arrested, he becomes bewildered, his hand trembles, dismay is depicted in every feature large drops of sweat stand upon his brow, and his whole frame is paralysed". Here we have presented, a case in which the practitioner is unable to afford any relief whatever and will probably aggravate the original disease a thousand-fold by adding some dangerous complication. In such a position too many urged on by feelings of pride attempt to force the instrument, and the life of the patient is often sacrificed, that they may escape the shame which an acknowledgement of their ignorance would inevitably entail upon them.

The instruments employed are of different material and vary much in size and shape, the ones principally used are those of Gum with a wire stilet, and those of Silver. The catheter is a cylindrical tube about nine inches and a half long, curved

along its lower third to accommodate itself more closely to the natural curvature of the urethra. its vesical extremity is closed at the point and rounded off. about ~~one~~ half an inch from this extremity it has two sometimes three oval openings about quarter of an inch long, the other extremity is perfectly open, and has on either side two small silver rings, which are used to fasten the catheter by when it is desirous to retain it in the bladder for any length of time, and also allow us to grasp the instrument more firmly.

The elastic gum catheter may be used either with or without the wire stilet. Some surgeons prefer the ~~wire~~ silver instrument and others speak much more highly of the gum. Sir Benjamin Brodie ~~for~~ uses the elastic catheter in all cases, and advises practitioners to keep them for some time bent on wires in the required shape. so that they may retain when the

when the stilet is withdrawn; Dr Gross speaks very disparingly of the gum catheter and lauds the silver instrument, the fact is however that the choice of the instrument will depend very much upon the case in which it is to be used. In speaking of the disadvantages attending the use of the elastic catheter Dr Gross mentions as the greatest objection to it that "it is very liable to bend whenever it meets, with the slightest resistance", now this is the very circumstance which renders the gum catheter so extremely valuable, as by its flexibility it more readily adapts itself to the urethra.

The diseases which principally demand the use of the catheter are those which cause retention of urine.

Although the operation of the introduction of the catheter appears to the bystander to be one of the simplest things in the world, yet when he takes the instrument into his

ever hand, unless he has previously studied
its use and has had some practical experi-
ence in it, he will most certainly make a
very poor performance. The skilful manip-
ulation requires a perfect anatomical
knowledge of the parts to be operated on
a considerable degree of nicety of touch and
a great deal of experience. A few practical
rules should always be born in mind
by the operator.

1st Any instrument which will pass through
the meatus urinarious, will pass along the
urethral canal into the bladder in the
normal state of the parts.

2nd A large instrument with a well rounded
extremity, will pass into the bladder much
more readily than a small one with a
conical point. The rationale of this is
trivial - the point of a small instrument is
more liable to become engaged in some
one of the folds or follicles of the mucous
membrane, which line the urethra.

3rd force should never be exerted to impel the instrument along the urethra.

Before introducing the catheter it should be well warmed by rubbing through the hand or by plunging it in hot water it should then be well oiled. after which it is ready for introduction.

Several different methods of introducing the catheter are recommended. the one which is the best and simplest for those who have not had much experience is. To place the patient in an erect position before the operator, who holds the instrument in his right hand and grasps the penis with his left. The catheter should be held in a line exactly parallel with the axis of the patients body, and with the rings pressed close against the abdominal walls. the penis should then be drawn forwards over the instrument as far as possible. Then holding every thing in that place the orifice of the catheter is to be introduced until the urine begins to flow. The instrument

should be held [illegible]
between the [illegible] and [illegible] finger, [illegible]
it may find its [illegible] along the [illegible].
A second method is one which is recommended most strongly by Sir [illegible], whose words in regard to it I shall quote.
"I generally find that I introduce the catheter best by keeping the handle of it at first close to the left groin of the patient. I pass it as far as possible in this position, then I bring the handle forwards nearly at a right angle to the pubes, and not elevating it towards the patient's navel, The next thing is to depress the handle which is to be done gently and slowly, by placing a single finger on it, and pressing it downwards towards the space between the patient's thighs."
This is certainly one of the easiest and surest methods of accomplishing the desired object.
There is however one other method generally practiced at the present day, by most surgeons, which is entitled "Le Tour de Maitre".
It consists in passing the catheter with its

convexity turned upwards instead of downwards and its rings between the patients thighs, as far as it is possible; it is then directly reversed by a gentle motion of the end of the instrument, which is made to describe a semicircle, it is then carried directly into the bladder by depressing with the almost gentleness the end of the catheter. The catheter of gum called the French in contradistinction to the English although made in this country, is, I have omitted to mention decidedly the best of the elastic catheters. It is true that the English instrument is not corroded near soon as the French, but yet the latter is much more flexible and will trace out a very sinous passage along which it would be impossible for an English one to pass.

If upon attempting to introduce the catheter there be much change in the relation of the parts, of course we will be obliged to adopt other means to assist us in

the operation, such as elevating the point of the instrument by the finger in the rectum or by pressure on the perineum &c but of the auxilleary means we will speak more fully when we come to describe some of the various diseases which demand the use of the instrument, and first in the long list let us notice that serious evil which results from over distension of the bladder. In elderly persons it frequently happens from some cause not perfectly understood, that the muscular walls of the bladder are not sufficiently supplied with nervous power, it can hardly be said to amount to paralysis but the contractility of the muscular fibres is lessened, the reason may be because it generally occurs in elderly persons and those whose are rather enfeebled in whom the nervous power is somewhat deficient throughout the whole system. The disease at its very commencement is readily noticed by the patient, it is generally commonly excited by the person endeavouring to retain his urine longer than usual, the bladder having

become overdistended is unable again to recover its former condition. The patient suffers some little pain at first this however gradually leaves him, and he feels pretty well.
He appears to pass his natural amount of urine, but in reality the bladder having been greater naturally distended has not left sufficient muscular power to expel its entire contents so that each time that the attempt is made to empty the organ, there is a certain amount of urine always retained. After this the first stage has continued for some time the bladder assumes a state of chronic inflammation caused by the decomposition which takes place in the retained urine, the mucous membrane secretes a stringy ropy mucus, which assists in the amoniacal change which takes place in the urine. It is generally at this stage of the disease that the attention of the patient is first attracted to his condition and his alarm excited. His statement will probably be that, that he finds that his

urine after standing a short time deposits ~~after standing~~ at the bottom of the vessel a slimy substance, tough and stringy. He will state that his urine has a remarkable ammoniacle smell which is very offensive, and he will complain both of all the symptoms of chronic inflammation of his bladder, such as, a frequent desire to make water, a dull heavy pain and probably tenesmus. In addition to this he suffers from loss of appetite, and considerable weakness.

If he be not soon relieved he will die perfectly worn out by "hectic" induced by the continual irritation excited by the disease. If we have an opportunity to examine the bladder of a person who has died of this affection, it will find the muscular tunics much attenuated and pale, the mucous membrane pale and often softened and partially decomposed. In contact with the ammoniacal

urine, the surface of the membrane will also be seen covered with the thick mucous and often lymph. The whole bladder is in a relaxed condition.
In regard to the treatment of this affection the chief indication is to guard against any accumulation of urine in the bladder. Without we carefully regard this indication the whole treatment will be utterly ineffectual.
In cases of this character where it is free from all complications, the catheter is easily introduced and it is on this instrument that we must almost wholly rely. If the patient is seen in the first stage of the disease, and if proper treatment be adopted, he will in all probability make a rapid and easy recovery.
The catheter should be introduced three times a day, and the bladder be kept perfectly empty, so that it may have an opportunity to contract on itself.

this will take place in a short [illegible]
will gradually recover its tone, and at length will
be able to empty itself entirely.
In the worst cases as well as in the most favorable
our main reliance is on the catheter, using at
the same time tonics, stimulants, &c as may
may be indicated. Cases of this kind however
ever have been known to last without either
medical or surgical assistance for two
years the patient at last dying from ex-
haustion.
The next disease, in which we are very often
called upon to use the catheter is an enlarge-
ment of the Prostate Gland. There are two varieties
of this disease, acute, and Chronic. The first
occurs almost invariably in young subjects
and is generally amenable to treatment.
The second is a disease remarkably common
among old men, and peculiarly obstinate in
its character; It is with the latter of these
that we have particularly to speak in connection
with the use of the catheter. There is generally

a certain amount of enlargement of the gland which does not interfere with the passage of water until the patient shall have been exposed to the cold or wet &c or something which acting as an exciting cause shall provoke congestion and swelling. When the bladder is often completely shut off and not a drop of urine can escape. The gland in shape something like an horse Chesnut lies directly around the neck of the bladder and the urethra passes through the upper and middle portion of it which is generally the seat of enlargement. The urethral canal is flattened from before backward instead of retaining its natural cylindrical form. The change which takes place in the Prostate Gland after the middle period of life can hardly be called a diseased condition but is rather a normal change which takes place in the parts. In many cases the partial retention of urine is caused by this enlargement of the gland, which is not increased in size sufficiently to close entirely the

passage of urine but only to interupt it.
Chronic inflamation is then lighted up as
we previously described, and in these cases
where we have added this complication, we
are very apt to have produced what is
known as the "Columnar" condition of
the bladder, or in simple words hypertrophy
of the muscular coat of that organ. This
peculiar state of the bladder is often produced
by many other morbid conditions, anything,
in fact, which causes the bladder to strain
violently in order to relieve itself of its
contents, if acting for any length of time,
is almost certain to be followed by it.
Between these muscular fibres the mucous
membrane becomes sucked away, forming on
the inner surface of this organ numerous
sacculi. Sir Benjamin Brodie, states this
remarkable fact, that in some cases these
pouches have been found to contain pure
pus while the bladder contains urine.
An old person who suffers under this peculiar

condition of the prostate, uncomplicated with any other affection, is always in danger of sudden suppression of urine If however he have proper treatment he will generally recome after a sickness of very variable duration, rarely does it yeild within the first week. After he recovers he is always subject to a relapse although he may not have an attack for a very long time.

It will not do to enter too fully into the pathology and numerous complications, so often met with in this affection. Our object is only to show the vast importance of the catheter in certain.

In these cases of retention of urine there is a point of great practical importance to be born in mind. Nature having allowed the kidneys to fill the bladder to distension, finding that that organ cannot discharge its contents, causes them to cease almost entirely from their office. So that there remains circulating in the blood a great amount of effete material, now

as soon as the bladder has been emptied. The kidneys resume their work with more alacrity than ever, and soon the bladder is as full as before. Therefore taking the hint from this we should only allow a few hours to elapse before introducing the instrument again. In other cases the introduction of the catheter is required when we have a rupture of the urethra. If the urethra is entirely divided or indeed more than half cut through it is almost impossible to penetrate the ruptured orifice. In these cases then it becomes necessary to pass the instrument down as far as the rupture, and then cutting down upon its point pass it directly into the orifice of the other portion. We have also cases of anteversion of the bladder in which the fundus presents forwards and the neck backwards. Here we meet with the greatest difficulty in the introduction of the instrument, however will be able to pass it with the assistance of the finger

in the rectum whereby we may elevate the point and by greatly depressing the external orifice. In one case of this kind which I witnessed so great was the change in the position of the organ that when the urine was drawn off it was necessary to hold the vessel which was to receive it directly below the anus the patient thus literally vaulting among the order of zebrominigent animals The principal points to be observed when we encounter any obstacle in the operation are to withdraw the instrument a little in order to free its point, to elevate the whole body of the catheter and then keeping it well applied to the upper surface of the urethra pass it gently forward. With some tact and considerable patience almost every case may be overcome.

An

Inaugural Dissertation

on

Erysipelas

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

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for the

Degree of Doctor of Medicine

by

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of

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Erysipelas.

Erysipelas

The disease, which forms the subject of my thesis, namely Erysipelas, is one long known to the profession, yet the study of it is rendered interesting from its importance, as it is frequently complicated with surgical injuries. It is a constitutional affection recognized by a peculiar local inflamation, which spreads with the continuance of the disease. It is usually accompanied by a fever beginning a little before, at the same time as after the local inflamation makes its appearance. In the onset there is languor uneasiness in the whole system, aching in the limbs and joints; pulse is accelerated alternately by flushes of heat. These are followed by a quick pulse short hot skin and in many cases by vomiting, headache, restlessness and bodily weakness. The patient

has often a sore throat – The lymphatic glands are frequently swollen in the vicinity of the local inflamation, those of the neck when the inflamation is upon the face, and those of the axilla and groin when the extremities are involved –

The local affection usually sets in on the second or third day of the fever, though sometimes earlier and sometimes later – A redish speck, a little elevated, painful and tender on pressure is first observed, when the disease is not consequent upon a wound – It occurs usually on the side nose, cheek or ear, but may appear on any part of the body. The inflamed spot, not being intercepted as in other inflamation spreads in all directions, forming as it advances an irregular elevated margin, whereby the diseased surface can be distinguished from the healthy – With the progress of the disease the skin assumes

a red and shining appearance and becomes hard and hot. The redness disappears on pressure but again returns. The progress of the local inflamation is in most cases continuous, but in some it has been known to invade in succession different parts of the body. The extent to which the malady is propagated varies. Sometimes it spreads slowly and is confined within narrow bounds whilst against diffuses itself hastily over an extensive surface, and in some instances, though very rare it continues till the whole surface is successively invaded. There is generally much swelling. The skin is thickened, and the subcutaneous tissue is in a greater or less degree distended. When the face is involved sys says Dr. Wood, the swelling is so excessive, that the features are entirely obliterated. Talking is rendered difficult from a stiffness of cheeks & lips. and the nasal passages are sometimes so obstructed as to

under breathing through them impossible, and the external orifice of the ear so closed as to interfere with hearing. The patient is further annoyed with a burning, tensive and pricking pain; and as the parts are tender on pressure is unable to rest upon them. When the head is involved he seeks in vain to find a position in which it can comfortably repose

We come now to another and I believe the last period in the course of the disease. After a continuance of the local inflamation for a few days it sometimes subsides ~~without~~ with desquamation without any observable effusion. In most cases however a serious liquid forms under the skin with small vesicles which run together and form a blistered surface followed by desquamation. With proper treatment the vesicles dry up in five or six days, and the surface becomes scaly which come off at a period of ten or twelve

twelve days leaving the surface covered by a new skin. The swelling and redness begin to disappear with the formation of the scales. The disease lasts about a week in favourable cases though of a shorter time when the patient is young and otherwise healthy.

Not unfrequently the inflamation begins to subside in one place and makes its appearance upon some other part of the body, and in this wise prolongs the disease for a month or more. Sometimes upon a removal of the scale an acrid lymph exudes, and suppuration occurs whereupon the disease assumes a protracted form. The cellular tissue is sometimes involved. In a case of this kind the inflamed tissue suppurates and becomes gangrenous. The one of these forms is call Cutaneous, the other Sub-Cutaneous. In the former a healthy pus exudes from small circular openings

formed in the skin, whilst in the latter a fetid purulent matter is discharged containing greyish strings of the dead tissue. The cut cutaneous ~~or cellular~~ is the form of disease most usually fatal: and when the patient recovers it is after much time and often with much deformity resulting from the adhesion formed among the muscles and between them and the skin. Besides those already mentioned there are many other forms of the disease mentioned by authors. I will ~~not~~ however speak of but one form more as the rest are only modifications of the disease. This is celulitis which arises from wounds or injuries of a slight character. It is especially apt to follow those in which there has been an inoculation of animal poison. It generally proceeds from dissection wounds, stings of bees or bites of reptiles. It affects the

membrane & tissues primarily and the skin secondarily - It is characterized by the rapidity and extent of the sloughing of the affected tissues, and by excessive depression of the powers of life - The symptoms vary but little from those of the other forms of the disease - There is great swelling, tension and pain in the limb. The skin is slightly reddened and has a spotted appearance and speedily turns into blackish sloughs - The constitutional symptoms are those of asthenic fever; a great prostration of vital and muttering delirium which set in at an early period.

Having thus far spoken of the disease only as regards its local effects - we come now to consider it as a constitutional disease. The fever sometimes during the prevalence of the local inflammation and is sometimes of a sthenic & sometimes of an asthenic nature. When the fever is sthenic its effects are little

difficulty. The pulse sometimes full and tense, though not very frequent. No symptoms of cerebral disorder is noticed that can be attributed to the fever except occasionally a little delirium. There are symptoms of great cerebral disorder, such as headache vomiting, restlessness, decided delirium and sometimes drowsiness stupor & coma, but these are present only when the scalp is involved and are attributed to the influence exerted on the brain by the local inflammation.

From feebleness of constitution or bad health — or the depressing nature of the cause of the disease, the fever is frequently of an asthenic type exhibiting the symptoms of a typhous state, namely feeble and very quick pulse, cool or irregularly heated surface restlessness, subsultus, low delirium or stupor, brown or black and dry tongue, dark sordes on the teeth and lips purplish or livid color of the inflamed surface, bloody serum in the vesicles ecchymosis

and a strong tendency to gangrene. Diarrhœa with black stools often supervenes in the course of the disease. Cases of this kind are apt to prove fatal either from the immediate effects of the disease proper or by means of the ulceration or suppuration consequent upon the local mischief.

In the majority of cases Erysipelas is curable. The fever ceases with the inflammation, and within a period varying from five to twelve days the patient recovers. Indeed it is rarely fatal, if properly treated, unless in persons of previous ill health, or of bad habits; or during the prevalence of some malignant Epidemic influence. Cases are nevertheless recorded which have baffled the skill of the physician. The disease primarily attacking the scalp in accordance with its usual nature to spread, has reached the meninges of the brain through the sutures, and other entrances of the cranium with fatal results. It has been known also to have passed to the brain

through the nostrils and ethmoidal cells. Death from erysipelas are recorded where the entrance of air to the lungs has been precluded by a pseudomembranous exudation in the glottes. Metastasis of the external inflammation to some internal organ sometimes results. It thus passes to the heart or brain and terminates fatally.

There are some forms of the disease of which I have not spoken, deeming it unnecessary as they are but modifications of the one malady — I propose next to treat of the causes of the disease. Medical men have been unable as yet to come at any certainty regarding the true causes of Erysipelas. Cold, abuse of food and drink, excessive fatigue, violent mental excitement as of fear or anger, suppression of habitual discharges as of the menstrual flux, or of old ulcers and the transfer of rheumatic or gouty irritation have been assigned

as causes of the disease. It cannot however be ascribed to these causes alone, as they have prevailed without the occurrence of Erysipelas Besides they have caused the disease at one time and failed to do so at another. The disease has also prevailed when it could not be attributed to the above causes: hence there must be some other cause. This is a constitutional predisposition to the disease. Any thing that depraves the system, especially through means of the blood creates this predisposition. In fact any influence that debilitates the body renders one susceptible to the disease - Nurses are known to have contracted Erysipelas from breathing the atmosphere of apartments in which Erysipelatous patients were kept. This is said to depend upon some condition of the atmosphere that favors the production of that form of disease. Under the influence of this peculiar air a simple scratch or slight wound induces Erysipelas. Like it occurs in this

way. It has been ascribed, by many to contagion. They have offered much to sustain this fact. The contagious nature of the disease is however denied by Dr Worrell, unless it be associated with some low form of fever. He says "neither in public nor private practice, have I ever seen a case of Erysipelas in which the appeared to be any proof of a contagious origin nor do I believe that as it ordinarily occurs it is in the least contagious. When however, it accompanies a typhus or malignant form of fever, there is no difficulty in accounting for apparent instances of this kind. An individual may receive the fever by contagion, and Erysipelas may develope itself at the same time under the prevailing influence; the febrile movement acting as the exciting cause of the latter complaint." Erysipelas according to Dr Worrell is not contagious, but is an Epidemic requiring a predisposition of the system for its development. From the best views of my learned

peculiar I am disposed to consider it contagious.
Another cause of the disease, of which I have not spoken
is the exposure of wounds to effluvia of dead bodies
or dissections. The poisonous matter enters the system
by inoculation. It continues up the course of the
absorbents of the arm, and gives rise to erysipelatous
inflamation upon the arm and often upon the head
& neck, causing great destruction of the cellular
tissue. This form of the disease is due to a peculiar
poison, and is usually attended by a fever of a
low type.

Erysipelas prevails in every season of the year, but
more frequently in the spring and autumn. It
attacks persons of all ages. It effects women
more frequently than men.

The inflamation of Erysipelas possesses a peculiar
nature due to some certain state of the system or
to some peculiarity of cause, that seem not to be
understood by professional men. It differs from

the ordinary forms of ~~inflammation~~ erysipelas in its known power of propagating itself from part to part circumscribed by a distinct boundary between it and the sound part, in the peculiar burning sensation it causes its tendency to gangrene as well as its non-exudation of coagulable lymph. Having thus spoken of the disease as regards its course causes and nature, I propose to speak of its diagnosis prognosis and finally of its treatment. The initial fever cannot well be distinguished from many other forms of fever until the local affection makes its appearance. There is one symptom mentioned by authors diagnostic of this peculiar fever, a painful swelling and tenderness of the lymphatics of the neck. It is the forerunner for twenty four or forty-eight hours of an intense febrile movement, even after appearance of the local inflammation, erysipelas may be mistaken for erythema the only disease that offers any difficulty in diagnosis

It can however be distinguished from Erythema by the greater swelling and hardness, the defined boundary and the continuity of the inflamed surface.

In good constitutions the prognosis is generally favourable. When the face and scalp are affected there is great danger as the brain is liable to become involved. Metastasis of the disease is unfavourable, when it occurs with ~~dropsi~~ symptoms of internal irritation. Death is apt to follow if the patient be old, intemperate, and previously infirm by disease. [illegible] with dropsy, and at the close of febrile diseases, though in these recovery sometimes takes place. When it attacks new born children it is fatal. Coma & delirium are unfavourable.

The treatment of Erysipelas is to be regulated according to the character of the case. It yields commonly to general & progressive remedies. But little medicine

required in mild cases. The patient should be kept on low diet, and at rest. Saline Cathartics and refrigerant drinks are the only remedies required. An active cathartic is usually given in the beginning for this purpose. Epsom salts is reliable. If there be considerable fever Calomel may be administered. It is required in all cases of a bilious character. The bowels must be kept open during the time of the disease by the use of cathartics. These must be varied according to the condition of the case. Saline cathartics are preferable during an active febrile excitement; Rhubarb when the disease is of a typhous character, and castor oil in cases of intestinal irritation. When the pulse is strong and full bleeding may be resorted to with good effects in young and strong constitutions. [illegible] all cases it is unnecessary, and in many, from existing debility, is positively [illegible]. It should

be employed in cases of Cerebral inflamation or congestion unless the pulse be too feeble to permit it. During the active state of the fever, nitrate of ~~silver~~ potassa may be used, and the ammonia when the condition of the stomach will permit. When the fever is decidedly sthenic a little tartar emetic may be used with great benefit. In cases where the general action is feeble and particularly if there be nervous symptoms such as restlessness, wakefulness, opium and ~~tartar emetic~~ ipecacuanha may be administered in combination, aided by the spirits of nitric ether, compound spirits of sulphuric ether, camphor water, and the warm bath if deemed advisable. In cases of great debility, when the symptoms assume a typhoid form with feeble pulse and gangrenous tendency of the local inflamation, stimulants & nutritious diet should be prescribed, as it is then necessary that the system should be aided

to bear up against the disease. For this purpose Sulphate of Quinia, the Mineral acids, Carbonate of Ammonia, wine whey, animal broths and jellies are useful. One should be guarded in the administration of Stimulants by the degree of depression or debility. If there be melancholy with internal inflamation bleeding may be employed, unless the depression of the powers of life when it will be necessary to stimulate. A blister or mustard plaster must be applied to the part of the local inflamation and the patient immersed in hot water.

In the application of remedies to the local inflamation much care must be taken as the irritation may be repelled by means of the remedies employed, and retreat to some vital organ and thereby cause the death of the patient. It should not be our aim so much to subdue the local inflamation as to regulate it;

to arrest it when likely to advance so far to lessen its violence when it threatens to lead to unpleasant results. Some remedy should employed to alleviate the uneasiness it causes the patient. Some bland mucilage may be kept to the inflamed surface. An infusion of slippery elm, sassafras or flaxseed may be used for this purpose. If the inflamation be severe a solution of acetate of lead impregnated with some narcotic may be employed with much advantage. The tincture of iodine and nitrate of silver are said to act very effectually in checking the local inflamation. A border an inch or an inch and a half in breadth should be drawn across the path of the advancing inflamation, one half on the inflamed surface and the other half on the sound skin. Upon this border the tincture of iodine & nitrate of silver should be applied freely and repeated daily if necessary until the inflamation subsides. When blisters appear on the inflamed

surface they should be opened to prevent their communication and consequently the loss of the old skin, before a new one is formed. If the old skin separate and leave a raw surface indisposed to heal, Goulards's Cerate may be used with great benefit. If gangrene occurs the dressing should be of emollient remedies to which creasote or chlorinated lime may be added as gentle stimulants and to prevent fetor. When the fauces and larynx are involved nitrate of silver in solution is recommended. If the rima glottidis become closed tracheotomy must be resorted to. In some cases the pharynx is so affected as to prevent deglutition in such cases nitrate of silver should be applied to the ulcerated throat and the strength of the patient supported by [illegible] and gumia injected into the rectum

Inaugural Dissertation
on
Alcohol

Submitted to the examination

of the

Provost, Regents & Faculty of Physic

for the

Degree of Doctor of Medicine

By

J. C. Riggs Wolfe

of Maryland.

There is probably no subject in Mat=eria Medica that is commanding more attention of the Profession, and certainly none more deserving of investigation than Alcohol. It not only engages the mi=nd of the Medical World but its merits and demerits are being discussed in every department of life. Authors to whom we should naturally look for information on this subject are comparatively silent. Of its mode of preparation they are sufficiently full and explicit; but of what is of far greater importance Namely its Physiological effects they are brief, vauge, and unsettled. It is to be regretted that an article so long known, and so universally consumed should still be shrouded with the Mantle of Mystery. Notwithstanding its antiquity and the fact that Millions of human beings are constantly paying Homage at the Throne of Bacchus, scarce two Scientific men

are found agreeing upon its action. We rejoice however to know that the attention of the Profession at present is properly directed to its study, and we hopefully trust, that ere long its true position in Materia Medica will be established beyond doubt or cavil. Alcohol in the Chemical sense is a peculiar liquid the product of the Vinous fermentation, which consists in the conversion of Sugar dissolved in water and mixed with Nitrogenous Matter into Carbonic Acid & Alcohol. The liquids which have undergone this change are called Vinous liquors and are of various kinds. Thus the fermented juice of the grape is called Wine, of the Apple Cider, and the infusion of Malt Beer: Alcohol is the Spirit of Wine, or Chemically the Hydrated Oxide of Ethyl, and is composed of $C_4 H_5 O + HO$. It is a colourless

transparent, Volatile liquid, of a vinous fermentation, agreeable odour and strong pungent taste. Its specific gravity at 60° F is 835. It boils at 173 but has never been known to be frozen; It is inflamable, burning with a pale blue flame giving out intense heat, It is resolved by Combustion into carbonic acid & Water. At what period Vinous liquors, were first submitted to distillation is not known, And it is supposed by some writers, that the Arabians, were the discoverers of this Article, We have sufficient evidence of its being known at a very early date. The first Spirits known in Europe was obtained from the Grape and Sold as a Medicine under the name of Alcohol. It was afterwards prepared from Grain, and Sold in small bottles, at a high price under the name of Aqua Vitæ. Fermented liquors however were known at the remotest

ages of Antiquity: Of their use prior to the flood, we have nothing on record, but we have not the slightest doubt, that Wine in particular was known and its effects realized. Nor did Noahs memory fail him, in regard to the culture of the Vine, while floating on a deluged World, for scarcely had the Earth become dry enough for tilling operations, ere he planted a Vineyard and of the Wine of the press he drank and was drunken. This act of righteous Noah leads to the conclusion that he was acquainted with the culture of the Vine previously. Man strong as it may seem even in the most barbarous and uncivilized state, is rarely content, to enjoy Natures gifts in their primitive condition, but Instinct and Instinct is Nature, has suggested various means, by which he adapts them to his taste, and makes them subservient to his happiness.

This fact when applied to the use of beverages suggests the idea that the use of Stimulants is instinctive, and hence they are a Physiological necessity. At an early period we find the ingenuity of the lowest races directed to the manufacture of mild Stimulating infusions of the fruit, leaves & root of various kinds of Vegitables. At this time even, nearly every Nation on the face of the Earth, has a favorite Beverage of this kind. The Siberians most cherished drink is prepared from a species of Mushroom; the South American Kava a highly intoxicating and to them delicious beverage prepared from the Pamquado tree, the Laps of which are mixed with several Vegitables, and the whole allowed to ferment in troughs made from the tree. In nearly all the Countries of Europe, various exhilarating drinks, besides the Alcoholic are used, to all of which the name of Nosbet has been applied. No order of people carries this to such an extent

as the Mahometans, who by their Koran are prevented from indulging in Wine. Such is the demand for these Beverages in the Orient that there is in all important households, a Servant, whose special duty it is, to prepare them for the family and guests. In the Seraglios of the Sultan, this department is presided over by an Officer of high rank. In the East of Europe a favorite drink is the Quass, a thin infusion of Barley in Water mixed with fragrant herbs, bordish to the taste, far from being aromatic, the disgust of the Foreigner and delight of the Native. In the Cities of Russia, nothing is more common than to see in the Streets at almost every corner venders of this most popular beverage. Not less universally used are warm stimulating infusions. That the Ancient Romans used them we infer from the Sureens, and contrivances to keep their contents warm, found in the ruins

of Pompeii; And at this time every Nation Heathen and Christian has its favorite drink. By some of the inhabitants of the Orient Coffee is looked upon as something sacred; and is drank in solemn silence while Coffee houses are called Schools of Wisdom. Ascending in the list of Beverages we come next to the milder Alcoholic Stimulants; And first of Wine. There are many kinds of Wines, the most innocent of which is obtained from the juice of the Palm tree; This from its refreshingness and mild sweetness is highly prized by the Natives of those Countries where the tree is indigenous. The thirsty Negro of the Tropics, Cat like ascend the Palm Tree, high up near its beauteous summit; bores a hole and the delicious liquid bursts forth to quench the thirst of the Native. The juice if kept a few hours, ferments, and the resulting wine contains not a little of the intoxicating principle.

The Vine of the Grape as we have seen was known from the most remote periods

of Antiquity: And Sacred Writ abounds with references to the Vine and its fruit: It is often praised while at the same time its dangers are set forth when immoderately used.

Not infrequently our Savior likened himself unto the Vine. We can plainly see from Sacred and profane history, in what high estimation, the Grape and its product was held by men of all ages, tongues & Countries. It so excited the admiration of the Grecians on its introduction from India, that they ascribed it to their great God Dyonisius and considered it a direct gift from Heaven, and annually celebrated it with feasts and Sacrifices: Indeed in some Countries its culture was protected by law, but what gave the greatest impulse to its culture is ascribed to Christianity. Its connection with the Morals of our Lord, his frequent reference to it in Parable and exhortation, and especially his institution of Wine as a Symbol of his own precious Blood, Made it Sacred

and dear to the heart of all Christians:
And as a token of their estimation they surrounded
their Churches and Convents with extensive
Vineyards. But it is needless to dwell longer
on this part of the Subject: We have thus
minutely somewhat traced the history of
Stimulants of which Alcohol is the type to
bear us out in the assertion that they are
a Physiological Necessity. If it is not so,
the history of Alcohol, forms a curious item
in the Annals of our Race, Sought after as
it is by every Nation on the face of the Globe
both Civilized and Savage. There is no con-
dition of Society in which it is not a favorite
Guest; It is found in the Palace and Poor House
in the Stately Mansion, and humble Cottage
in the Sanctum of Priest and the Billiard Saloon
In short; wherever man is found Alcohol is
found also, No Sects or Conditions, but what
has felt and acknowledged its influence;
King & Subject, the rich and poor, Patrician
and Plebian, high and low, Saint and

Sinner; the joyous youth, the pearled Dian, the gray headed Sire, all, all bow to the Magic power of Wine. Instinct is just as important to our well being as reason, and must not be thwarted in its demands. It impels to actions at once necessary to the happiness of the individual, and to the Race; but this principle is subservient to reason and experience, these dictate to us how far instinct is to be followed, when and where to be restrained: This without the guidance of reason, would lead the individual into dangerous paths, and excite to actions at once dangerous destructive and degrading. But we do not insist on the indiscriminate use of Alcohol notwithstanding the accuracy of this theory: Indeed we do not insist on its use in a state of health at any time, yet we will attempt to show that it is an Article not entirely destitute of virtue as many would fain have us believe. The reason that this Article has been brought into such disrepute, is because

its abuse alone is seen by the publick eye, And notwithstanding our neutrality in this subject, we do not hesitate to avow our opinion that the evil arising from its use outweighs by far the good; At the same time we still advance, that the abuse of a good thing in itself does not afford a valid argument against the right use of it; We verily believe it to be a blessing in itself, yet this like many other of Heavens choicest gifts, is made a curse. We propose to look at the effects of Alcohol in the light of Science, and see wherein lieth its good. In these days men are too prone to join the popular cry in favor of Teetotalism; and even sacrifice truth and science on the Altar of temperance reform, with voices raised they set forth only the evil arising from its use. The Itinerant Reformer draws a picture with all the vividness of his imagination, in which he presents a victim of intemperance

in his wretched Hovel, the very embodiment of all that can be abhorred. Surrounded by a heart stricken Wife, and Starving Children and wearing his Spell bound Audience to beware of the fatal cup. The Medical Man taking as he supposes a more scientific view of the Subject looks upon that same beastly and bestotted drunkard, and sees in him a perfect, living, moving, pathological Museum: With this one sided and contracted view of the Subject he beholds evil as the result of stimulation and in his infatuation, he would fain banish this article from Materia Medica.

But amidst all this excitement of reform, and the invections that are heaped on a man that would dare look fanaticism in the face, it behooves us as members of a Profession to preserve our equilibrium upon this Subject, to lay aside all preconceived opinions, and call Science to aid us in our investigations

There is no other way of arriving at truth; If Alcohol be found to be an an article possessing no virtues, and its use followed only by evil, then we would say let it be banished from the face of the Earth. If on the other hand it posses virtues of the greatest utility, that it is a blessing perverted though it be, then it is our solem duty to use it as such, and at the same time ever ready to rebuke its misapplication. Physiological Effects. Wen Alcohol is taken in a moderate quantity its first effect is nervous and vascular excitement; The pulse is increased in force and frequency; The face is flushed, the eye bright and sparkling with animation, the intellectual faculties are excited, thought is free and rapid, wit and eloquence often pour forth in spontaneous exuberance, and every function is intensified; It excites his passions and emotions, imparts energy to Body and vigor to mind, and thus gives vigor force and decision to his mental character

A feeling of satisfaction and serenity pervade the system, dull cares are banished, in short soul and body seems lifted above the exhausting affairs of life. Gradually this excitement dies away, and is followed by a sense of languor and debility: If the dose be large enough, other effects which may properly be considered the second stage now follow: He now loses control over his mental and physical functions, his senses are perverted, he sees double and imagines a thousand things that have no existence, volition is impaired and gradually lost, he now assumes a horizontal position, manifesting little concern about the spot on which he lies, feeling upward for the ground—. The third stage now follows, the last scene in this disgusting drama: Everything is confusion and chaos, the breathing laborious and stertorous, pulse slow and finally sleep supervenes. Such is a short description of a fit of intoxication. We will not

follow the patient through his convalescence, suffice it to say he presents rather an unenviable condition, with secretions shut up and headache almost insupportable. But as we propose to dwell more particularly on the good effect of Alcohol in health, if there be any; we will enquire if any good can follow when used to produce its first effect: We certainly think there can, while at the same time we doubt not that many a noble spirit, has been wrecked by persisting in the use of Alcohol, first taken to stimulate the mental faculties. Nor do we doubt that many a bright genius has slumbered away an existence simply on account of his timidity, for the want of a little self reliance and moral courage; whose latent faculties might have been aroused to action and the performance of heroic deeds from the magic influence of stimulants. If a man possesses any mind Wine will develop it, while if he be a fool it will as surely develop his folly. There is no better

way of developing a mans true character.
If he has any force it will be called out; if he
has any imagination, Wine will cause it to yield
its choicest fruit; If he has none, he might as
well try to draw water from the flinty Rock,
or strike fire from a Potato. ex nihilo nihil fit
If a man have faculties, the question now
is when they should be aided by Stimulants;
Of course not in the ordinary course of life; but
in such cases where the Exigencies of the occasion
fail to call forth the energies of the mind.
They have been resorted to. Some of our most
able Statesman when some important occasion
demanded an exhibition of their greatest powers;
Some of Websters ablest efforts were made while
under the influence of Alcohol. Even blisters
have been used for their stimulating effect on
the Nervous System. What then is the result
of this energizing of the emotions and intellectual
faculties?, We conceive it causes Structural
changes in the Brain Substance, fitting the
individual to perform deeds of a higher Nature

character, in short fitting him for a higher destiny. The same phenomenon is presented in the Muscular System: If a muscle be allowed to remain in a quiescent state, it will be soft and flabby, weak and inefficient; but if called into frequent and active exercise its volume and strength will be wonderfully developed.
In this way we think Alcohol if judiciously employed may be serviceable. On reading the very able Essay of Dr Carpenter upon the subject, we are at once struck with his powerfull defence of Teetotalism, and at the same time of the fallacy of arguing from abuse to use. Teetotalism rests upon two grand pillars, and all its advocates base their arguments upon the same; namely, 1st that Alcohol is a poison and not a food; 2do that whatever is true of its excessive use, is also true in a proportionate degree of its moderate and occasional use.
We do not hesitate to say that we take an opposite view of the subject; we think 1st that Alcohol is food; The 2d assertion is also a

of food. The daily consumption of respiratory food is five times greater than plastic. Now if we can show that Alcohol affords fuel for respiration, and that any thing which accomplishes this is food, and that food is force, we have fulfilled our object in part. That it is force is self evident. It is the aim and end for which it is taken; whether plastic or respiratory, whether it goes through the intermediate stage of tissue or directly consumed in the furnace of the organism, this is its ultimate object and this it most certainly accomplishes. In his principles of human physiology; Dr Carpenter divides food into 4 groups; Saccharine, Oleaginous, Albuminous and Gelatinous; After defining the 1st group, he says, that whilst Alcohol which is derived from sugar by the process of fermentation has a composition, which rather connects it with the next group, the Oleaginous; thus evidently admitting it as food; While in his Prize Essay it is a poison essentially, intrinsically such. In the pursuance of this subject he continues, we may estimate the

relative value of different articles of food, for the two distinct purposes of tissue formation, and the production of heat; for the proportion of Albuminous matter which any substance may contain, furnishes the means of its tissue forming value, whilst the proportion of Hydro Carbon uncombined with Oxygen, affords the means of estimating its Calorific force when Oxidized. Now by referring to the constituents of Alcohol we find it composed of more pure Hydro Carbon than any other alimentary substance.

We are now enabled to arrive at the rationale of this part of our subject; The body require a certain amount of food for its sustenance. Oxygen the life giving principle as we have seen, is also the great destroyer of the organism. This agent is ever destroying ever making anew. Food it consistently demands to satisfy its voracious appetite, and if sufficient be not afforded from without it destroy more rapidly the body. Leibig says Alcohol stands high as a respiratory material. It is a well established fact, that persons who use

Alcohol in a scientific manner, require less solid food, than those who abstain from it entirely. It not only supplies the place of other food, but it saves the tissue from being burned by offering itself as fuel. This is on account of its greater affinity for Oxygen than other food, or the tissues of the body. What more will be demanded to prove that alcohol is food. To preserve the system in a physiological condition two things are necessary, Namely - Heat and Force. Now if there be not sufficient respiratory food offered from without, the tissue is converted into heat, and to repair the loss plastic food is necessary. If there be any mode of developing heat without this destruction of tissue, is it not practical, would it not be economical to adopt that plan. But it is argued, this substitution results in the retention of effete matter in the system, Alcohol being burned in the place of the debris promotes its accumulation; This does not necessarily follow, This destructive process will be arrested and less effete matter formed. There is no

necessity for combustion of tissue, only for the production of heat, Alcohol, thus furnishing fuel for respiration, leaves the tissue in all its integrity fitted to perform the varied functions of life. Now if alcohol answers this end, if it furns respiratory food as we have abundantly shown, then it is not a poison but is nutriment. In the healthy active man, when all the functions of the organism are regularly performed, this artificial aid is not necessary, nor do we encourge its use; But in the aged and infirm, or other weakly persons whose fat and tissues have begun to waste, in whom the nutritive process fails to supply the natural waste, here its beneficial effects will be realized. It gently stimulates the digestive organs, and assists them to do their work more properly, gives warmth to the body, imparts a buoyancy to the Spirits; it short it lends youth to the aged. Poets not inaptly have called Wine, the Milk of old age, and Science and experience owns the propriety of the term. The action of Alcohol upon the

blood seems to afford the basis for much argument against its use. When mingled with the blood it is said to produce the coagulability of its fibrin, and if examined under the microscope, the red corpuscles are seen to shrink and give forth a considerable part of their contents, to be swiped with the Liquor Sanguinis. If taken so as to produce its narcotic effect we verily believe the blood would be impaired in quality. But how is this effected, Nothing is plainer it impairs the respiratory process, and as a natural consequence the blood is unduly aerated. As to its effect upon the red corpuscles their is certainly much entertained that is not true. Instead of producing their degeneration when moderately used, it has an entirely opposite effect; If they are not directly formed from it, it is the immediate cause of their increase. The muddy complexion of the dram drinker is so evident that the color of a mans face has ever been considered an index to his Temperate habits. In contrast the man who uses Wine for his

stomachs sake, and whose bloodvessels are filled with red blood, seemingly ready to gush from every pore, and the lank thin form of the Teetotaller. A large percent of men, scarce worthy of the name of men, in almost every community, might be made men indeed under such treatment; they are poor specimens of humanity both physically and mentally; their lean angular forms and care worn visages attest but too plainly that they have thwarted the demands of Nature, and violated her laws. Yet these same imperfect individuals might under the judicious use of Alcoholic beverages be developed into men that would no longer be a libel on the works of Nature. Natures prescription for perfect men has not been half filled: Their digestive organs it may be, are not capable of doing more than simply keeping soul and body together: they merely supply the waste of the tissues and no improvement is made. Now Alcohol increases the appetite enables the stomach to digest more food

Such doctrines are dangerous in the extreme; and the men from whom they emanate may be considered as equally dangerous. Dr Carpenter has proven himself a devotee of Science, and not less so of Gold: When writing for Science he spoke plainly on the subject of Alcohol, and showed wherein it was good; But when the God of this world was presented to his mental vision in the form of 100 Guineas he no longer writes for Science & truth, he writes for gold. It is a late discovery that this article is such a rank poison. It has been used indiscriminately since the creation of the world; but only of late years has this remarkable discovery been made. But in this fast age, when, when old things are passing away and all things are becoming new it is scarcely to be wondered at. But this is emphatically an age of humbug, as well as improvement and Science. Whatever new scheme is started, it matters not how

ridiculous it may be, it will certainly find advocates; The total abstinence System has undoubtedly seen its Glory, and is now on the wane. Truth is powerful and will prevail, if crushed to the earth it will rise and flourish again; The appetites of men can never be governed by the laws of man; (Natures) laws were first written in indelible characters upon the heart of every human, and human diction cannot detace them

and in a more perfect manner, while at the same time it arrests the destruction of tissue by offering itself as respiratory food, and the plastic food now goes to the building up of the tissues thus making a clear gain. In this manner a sanguineous temperament will be developed, and a tendency to disease in a great measure averted. In all cases of tuberculous or scrofulous diathesis: Many no doubt under this regimen might be snatched from the terrible jaws of Phthisis and Scrofula that are often ready to receive them, and saved to lead long and useful lives. That scourge of the human race, Phthisis Pulmonalis might be robbed of its terrors. Even when he has laid hold upon the system, we need not yield to his grasp, but by the treatment above prescribed, his shackels that fall like a death knell on our ears, may be thrown off and the patient allowed to live out his three score years and ten. This disease is characterized by a rapid emaciation, in other

words a rapid Oxidation of the organism.
By the use of Alcohol this is immediately checked,
in the manner heretofore specified; while our
means are now directed to the restoration of the nu-
tritive function, an impairment of which lies
at the bottom of this Malady. This is no far
fetched hypothesis of ours, it is the voice of expe-
rience; Will the medical world be silent to its
call; Shall this fell destroyer of the human
family be allowed ever to commit its ravages
unmolested, or will truth and science
arrest him in his devastating career. Yet
Croakers from out the profession will be
heard to exclaim; Alcohol is a poison, it
is better to let our patient die with consump-
tion than to poison him to death, or he had
better die solely with the disease, than cure
him and run the risk of making him
a drunkard. This is no fiction: Medical
men have been known to say that it is
better to let our patient die, than give
them Alcohol to save their lives.

giving principle without which man could not survive a moment, wisped by the unerring hand of Nature it forms the vital principle of our existence; but if inhaled in a pure state, it is a most virulent poison, and rapidly destroys life. Shall we then abstain from Oxygen and Beefsteak, because if taken in immoderate quantities they kill? We might add unto many other examples of the poisonous effects of some of the most important articles in the Materia Medica when used in excess. Thus Opium the sheet anchor of the Physician without which he would in a measure be powerless, is a destructive poison if injudiciously taken. Arsenic so harmless and efficient when cautiously used, is one of the most destructive agents in Medicine; And yet if this article be used in minute and regular doses for some time, it is said to give increased vigor and beauty to man; And in some countries is used for this purpose. Having thus shown the impropriety of comparing use and abuse of Alcohol; We will attempt in

the next place to prove that Alcohol is food. Science teaches us, that food to be properly understood must be considered under three aspects: 1st it repairs the waste of tissue consequent upon the wear and tear of life; 2d it furnishes fuel for respiration, the main source of animal heat; 3d Constituting under these two heads, the generator of force. Man is so organized that the two processes of waste and repair are ever operating at the same time, and throughout his entire existence: Every breath we draw, every muscle we move, nay every thought we think destroys a part of our organism, and hence the necessity of fresh materials to supply the loss; Liebig very properly divides food into two kinds 1st plastic or tissue making; 2d respiratory or heat making, This division though somewhat arbitrary, is nevertheless convenient for all ordinary purposes; Now when we contemplate the subservation of each requisite for the maintenance of the functions, we can readily perceive how Alcohol is made subservient as an important element-

fallacy, use is not abuse. Having thus defined our position on this part of our subject, we would most respectfully beg leave to say that we are no enemy to the Temperance reform, on the contrary we look upon it as one of the greatest Moral triumphs of the age. We have ever raised our powers in its favor, and ever expect to be, battling for temperance but never for Teetotalism. But the good cause of temperance needs not to be supported, by a sacrifice of truth and science. On the 1st proposition Dr Carpenter remarks; That the action of Alcohol on the Animal body is essentially poisonous, producing such a disturbance in the regular current of vital action, as when a sufficient dose or succession of doses are administered becomes fatal. We take Dr Carpenter as the great organ of the Antialcholic party, and we readily assent to every word in the above assertion, but essentially poisonous.
In the face of testimony derived from its

daily use by men of all ages, tongues and countries, he boldly makes this surprising assertion, and to substantiate which, he brings forward the remarkable ~~effect~~ fact that if large doses of pure Alcohol be injected into the stomach of a dog, it immediately terminates its existence: And again, what is still more astounding, a soldier after drinking seven pints of Brandy, died on the spot. If these examples were adduced to prove that Alcohol would kill, they would have been weighty arguments, but they fall far short of proving it to be essentially poisonous. On the same principle any thing that produces from quantity, a violent and general shock to the system producing death, might with the same propriety be called a poison. A man who lives and grows fat on one ℔ of beef steak at a meal, would doubtless meet the same fate as the unfortunate soldier did he indulge in twenty ℔ at one meal. Again this may be stikingly illustrated in the use of Oxygen, that life

An

Inaugural Dissertation

on

Typhoid Fever —

Submitted to the examination

of the

Provost, Regents, & Faculty of Physic

of the

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for the degree

of

Doctor of Medicine

by

Daniel Riesel. Md

1861 —

Typhoid fever is one of a class of diseases known as continued fevers, which, in defiance of medical treatment, extend through a regular and limited period, and run their course without intermission of febrile symptoms, but have however a decided tendency towards remissions and exacerbations occurring every day. The class of continued fevers is reduced to two special forms Typhoid and Typhus which though members of the same family, and closely resembling each other in name, and many of their features, are nevertheless entirely distinct; distinct in their symptoms, anatomy, and geographical distribution.

An attack of typhoid fever is characterized by the following symptoms. The patient complains of sensations of chilliness not amounting to distinct rigors, alternating with febrile flushes which he attributes to a change in the weather; weariness and languor for which he cannot account, loss of appetite, dulness of mind, and inaptitude for mental exertion, pains in his back and limbs, with a hot and dry skin, and flushed face. The tongue is slightly furred, and the mouth, fauces, and throat, so dry as to render deglutition difficult. The secretory function, partaking in the disturbance, is to a great degree arrested, the bowels however are relaxed, and continue so throughout

the attack. These symptoms usually on-
without marked change for several days
during which time the patient although
feeling unwell and unqualified for exertion
is not till now sufficiently ill to be confined
to bed. The symptoms having all become
aggravated, and the disease fully estab-
lished, all the ordinary phenomena of
fever are observed. The headache is increased
the face flushed or of a livid dusty appear-
ance, the pulse quicker, the skin dry and
parched, the eyes injected, the tongue
furred; at night restlessness and inabil-
ity to sleep, the patient tossing about in
bed, "seeking rest but finding none."
The diarrhoea is still present together with
epistaxis, which though moderate is not

without its importance as a valuable diagnostic sign.

For several days now, little or no change is observed in the condition of the patient, the symptoms then all become still more aggravated. The head-ache increases, the pulse becomes more frequent and weak, the complexion more dusky and purple, the countenance assumes an expression of apathy and indifference to surrounding objects, the tongue clammy or dry, the thirst great, the stomach irritable, the diarrhoea increases, with transient pains in the abdomen, gurgling in the right iliac region, tympanitic distension, and the urine scanty, high colored and offensive; to these is often added

cough, arising from complication with bronchial irritation.

If now, about the eighth or ninth day the abdomen be examined, there will be seen upon its surface, the distinguishing characteristic of typhoid fever, an eruption, resembling much in appearance flea bites and known as rose spots. Another eruption is also visible, as a usual attendant upon the disease, but making its appearance later than the rose spots. This is of a vesicular nature, and called sudamina, appearing first on the chest and neck, extending sometimes though rarely to the extremities.

Often the disease is now arrested, and an amelioration of the symptoms [illegible]

claims that the danger is to a great degree over. Should it however continue, it then assumes more of a typhus character. The nervous symptoms all become aggravated, the headache passing into delirium, or coma, and the tinnitus aurium is followed by [illegible] or total loss of hearing. The eyes are sunken, the face very dark or purple, the tongue dry, [illegible], and often fissured, the teeth and gums covered with sordes, subsultus tendinum and the pulse [illegible] scarcely perceptible. There is low muttering delirium or complete coma and the patient, if [illegible] at all, is [illegible] with great difficulty [illegible] into [illegible]

The patient has now of course but little strength remaining. he lies on his back and is constantly slipping down in bed picks at imaginary objects on the bed-clothes or makes vain attempts at catching objects which he fancies are flying before his eyes. and which is owing to partial insensibility of the retina. There is often retention of urine or at times. an unconscious or involuntary discharge of both urine and faecal matters. which by their contact with the now greatly debilitated surface will produce painful excoriation and bedsores.

Although the vital powers are now in the very brink of dissolution, yet recovery from this extremely critical condition is by

no means rare or impossible, for I have seen several cases, in both of which the most [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] this time, it was scarcely possible to distinguish the faintest signs of life, yet both recovered. But to procure this happy termination two conditions are particularly essential, one that the local complications may not have progressed to an alarming extent, and the other that the patient have strength enough remaining to carry him through this distressing condition.

A scarcely perceptible pulse, increase of coma, and lividity of countenance, the surface universally cold, and covered with a cold clammy sweat, warn us that our efforts to arrest the disease and restore our

patient to convalescence have been unavailing, and that the termination of his life is rapidly approaching.

As some of the symptoms already enumerated afford prominent diagnostic and prognostic signs it may not be amiss to notice several of them more particularly, and although I believe few if indeed any of them are universally present in every case of Typhoid fever, still some of them so generally appear as to be valuable in aiding us to form our diagnosis.

The most important and reliable is the peculiar eruption known as rose spots which consist of small round spots slightly elevated, of a light florid color disappear-

ing under pressure, but reappearing the moment pressure is removed. They first make their appearance on the abdomen and sometimes extend to the chest and neck, and occasionally though rarely to the trunk and extremities. They vary in number, sometimes there are present but 3 or 4 at a time, while at other the abdomen is almost covered. They are always isolated, never run into each other as does the eruption of typhus and appear in successive crops, each lasting a few days then disappearing to be quickly followed by another crop.

Sudamina, another eruption, peculiar to typhoid fever, consists of small vesicles about as large as a pin's head

similar to drops of perspiration standing on the skin. They first appear on the upper part of the breast and neck and sometimes though seldom extend to the trunk and extremities. They usually appear later in the disease than the rose spots, about the fourteenth or fifteenth day.

Tympanitic distension of the abdomen accompanied with a gurgling noise in the right iliac region, is [illegible] among the most universal attendants [illegible] phoid fever. It is caused by a collection of and passing [illegible] from the [illegible] of the intestine to another, gas or gas and liquid, which often exists in such large quantities that it impedes the function

of respiration, by injurious pressure on the diaphragm. As it seems to be present in degree proportionally to the severity of the disease, it may afford us a good prognostic as well as diagnostic sign.

Haemorrhage not unfrequently takes place during the progress of the disease. At first it occurs in the form of epistaxis but it often excessively and fatally comes on from the bowels, perhaps from the division of some of the mesenteric veins by ulceration and not unfrequently this happens early in the disease.

Diarrhoea, although occasionally absent, is a general while accompanies typhoid fever. It varies greatly in

severity, sometimes moderate, at others profuse and exhausting. It is prominent among the earliest symptoms, and differs from the discharges from the bowels in other fevers, in that the matters evacuated, are not essentially altered from the natural appearance except in consistency. It comes on spontaneously or is excited upon the administration of a brisk cathartic, becomes more violent as the disease advances.

The nervous symptoms still require notice, as they are the most characteristic. The headache which usually comes on in the beginning of the disease, either ceases or passes into delirium or coma, the dulness of mind is man-

ifest in the expression of apathy and indifference which hangs upon the countenance, the delirium not becoming severe until later in the disease varies in degree sometimes being mild and transient. then again it is wild and uncontrollable, and finally running into low muttering delirium or profound coma.

Although the symptoms thus far described indicate the usual course of typhoid fever there are several varieties or complications, requiring merely a passing notice.

Often symptoms indicative of disorder of the brain are most prominent, and by this means others more obscure are passed by unobserved. Sometimes there is delirium or coma produced by inflammation of

the membranes of the brain, or by strong determination of blood to the head and sometimes dependent on loss of strength in the brain, rather than [illegible]

Or sometimes there are more evident symptoms of gastric, hepatic, or intestinal disorder, [illegible] of inflammation, with tenderness of the abdomen, pain in the bowels and stomach diarrhoea or vomiting of bile, and if this is not soon arrested, the more dangerous symptoms of typhus make their appearance, and the case is apt to terminate fatally.

Instead of the cough usually accompanying typhoid fever, which is dry with little or no oppression, we sometimes have

painful and difficult respiration, pain in the breast with thick, tenacious and rusty expectoration, warning us of the danger of pneumonia.

Typhoid fever is distinguished by its invariable anatomical characters, specific lesion of the intestinal glands, and corresponding glands of the mesentery. Although there is not an organ or tissue of the body that does not exhibit after death some evidence of local inflammation and derangement, still there is a specific lesion of Peyer's glands as peculiar to [illegible] fever as is the eruption of small pox or measles peculiar to those diseases.

The inflammation is not of a common

but of a specific character, for very generally it is circumscribed and not diffused as ordinary inflammation of mucous tissue usually is. Again the morbid process almost constantly extends to the subjacent cellular membrane which is almost never the case in common mucous inflammation of an acute character. Its tendency to rapid ulceration and the appearance of some of its morbid products, would also seem to show something special in its nature.

The first morbid change observed in the intestines is slight swelling of the mucous membrane covering Peyers glands. They then become enlarged, red, and swollen, and dotted with minute black

spots; then follows a deposition of what is called typhus matter, which gives them the appearance of dark, yellow or brown patches. This deposition is soon removed and the ulcer formed. These changes are more numerous, more common and more advanced as we approach the caecum. This local lesion of Peyer's glands is not the primary and essential cause of typhoid fever, but it is the secondary, the effect and only one of the pathological constituents of the disease. It is no more the cause of typhoid fever, than are tubercles the cause of phthisis pulmonalis, or the eruptions of small pox, or measles the causes of these diseases. One of the most constant and uniform characteristics

of secondary lesion is the fact of it's being disseminated. The lesion here is disseminated, it cannot be artificially produced by any of the common causes of inflammation. it depends [illegible] it has a regular march and determined duration. passing through its several stages and terminating if life is not destroyed, in a return to health. and finally this process is but little under the control of art.

The fact that ulceration, and perforation of the intestines has occurred although an extremely perilous condition is by no means a guarantee that all chance of recovery is lost, for [illegible]

no doubt that ulceration even though extensive undergoes resolution, leaving behind no permanent mischief, not diminishing in the least the calibre of the intestines. For this happy issue however from so unfavorable a situation two conditions are eminently essential, the one that the deposition of typhus matter has been arrested, the other that the patient has strength enough left to carry him through this extremely critical condition.

The difference in degree of pain in the abdomen is owing to the difference in extent of the ulceration of these glands as the mucous surface under inflammation is not very sensitive and as long as the ulceration is confined to this tissue [illegible]

[illegible] is slight. It then increases as the ulcerative process makes its way through the muscular and peritoneal tissues, and when it has perforated the intestine fatal peritonitis is apt to be at once set up. Complete perforation is more apt to take place during mild attacks than severe ones.

The mesenteric glands, and the solitary ones also follow the course of Peyer's glands but never form abscess. The office of these glands it is said, is to eliminate poisonous matters from the blood, and that ulceration is caused by the continued presence, and passing out, of these poisonous substances from the system.

Ulceration of the pharynx has been

observed in many cases of Typhoid fever. [illegible] during [illegible] attack of its [illegible] disease, typhus, [illegible] during the progress of Typhoid fever does not differ from its natural condition, [illegible] [illegible] [illegible]

Regarding the cause of Typhoid fever little is known positively. Three conditions necessary to its origin have however been dwelt upon particularly by writers, namely age, location, and contagion. Of the first of these it is hardly necessary to speak, for although the disease does generally attack the patient within a limited period of his life, still we think this circum-

[illegible] to be considered a cause. The [illegible] life at which [illegible] is between the age of eighteen and forty five and the [illegible] of a coincident than a primary cause.

Vocation we believe to be instrumental in origination. Typhoid fever. It is usually generated in places where many persons are crowded together - where there is defective ventilation, and either an indisposition or inability to avoid filth.

But it prevails as well in the country where the air is pure and fresh, and in isolated cases as in the close, confined, and ill ventilated houses of cities or in prisons. It prevails epidemically in

[illegible]

its visiting indiscriminately, and at all seasons, places the opposite of each other as regards location and atmospheric peculiarities, is but one of the many inexplicable peculiarities of this imperfectly understood disease.

With regard to the question of contagion influencing the propagation of the disease the profession are divided but we believe there are stronger reasons against the theory of contagion than for it. We often see cases of typhoid fever of the severest form exist individually in large families, where all were exposed to its influences, and where the

[illegible] of [illegible] [illegible] [illegible] favorable circumstance for developing themselves and producing to the utmost extent their deleterious effects, if any they [illegible] [illegible] [illegible] of the [illegible] family. And [illegible] [illegible] in the [illegible] Infirmary where we have constantly cases of Typhoid fever, the disease is always contracted [illegible] fully established before the patient's entrance, but it never extends beyond the individual case, nor contracted by any of the other patients inhabiting the same ward, and who are constantly exposed to the all effects of hospital life, and where contagion with its worst effects could be easily developed.

Hence we think the theory of contagion as connected with typhoid fever altogether inapplicable and unfounded. It is true that it often prevails epidemically, but as one will assert that epidemicity and contagion convertible and [illegible] terms, for we frequently have diseases prevailing extensively as epidemics as intermittent fever and bilious remittent which are not contagious. It often prevails widely in the same family so that every member is prostrated with it, but here we must remember that all the family are exposed to the same influences, and what would injure one member might injure all

It must be seen then that as to the true and primary cause of typhoid fever we know but little and what we do know is but conjecture - There is supposed however to exist an inherent predisposition to the disease, and that some exciting cause is necessary to develop the disease and that exciting cause is some poisonous substance having a compound influence on the blood and solids inducing specific lesions

Typhus fever is [illegible] disease, the poison acting on the blood primarily and secondarily on some other part of the body although no specific lesion whatever can be discovered after

death. It prevails epidemically, f[illegible] [illegible] causes, [illegible] accompanies famine and destitution especially in overcrowded and ill ventilated dwellings, and when once [illegible] among all classes visiting with impartial footsteps the lordly palace of the rich and the hut of the poor.

One peculiarity of both these [illegible] is they do not occur [illegible] in the same person, and the imperfect protection which [illegible] to the subject against a second invasion has no reference whatever to the other.

[illegible] and Typhus fever are really and en-

tirely distinct diseases. distinct in their symptoms and course, in their duration. in their comparative [illegible]. in their eruption. in their [illegible] organic changes and in their [illegible]

[illegible] of [illegible] of the disease invariably present, none that we can look upon as actually [illegible] but by a careful study of all the symptoms and circumstances, we can generally form a pretty correct diagnosis.

I will enumerate several features characteristic of both Typhoid fever and [illegible]

marked.

2. In typhoid fever the heat of the skin is moderate and variable: in typhus it is more constant and marked.

3. [illegible] is always irregular and intermittent; in [illegible] it is [illegible] the same for a while, then gradually descends to its former condition.

4. Epistaxis is [illegible] in typhus [illegible]

5 Intestinal haemorrage is frequent in typhoid fever, but in typhus it is [illegible]

rarely or never observed.

6.- The emaciation more marked in typhoid than typhus.

7.- The brain symptoms especially delirium, dulness of mind, and coma appear later and slowly and gradually increase in typhoid fever while in typhus they are more marked, and developed earlier.

8.- In typhoid fever diarrhoea is a prominent symptom, accompanied with transient pains, tympanitic [illegible] and gurgling noise in the right [illegible] region; in typhus the [illegible] are constipated, and there is no meteorism or gurgling.

9.- The specific lesions in the two diseases are not identical: in typhoid the lesion in Peyer's and the mesenteric glands form the distinguishing characteristic of that disease. The spleen is also more enlarged and softened, and ulceration of the pharynx and oesophagus often occur. In typhus Peyer's glands and the corresponding mesenteric are natural, the vessels and sinuses of the brain more generally gorged with dark blood, and the lungs exhibit more frequent traces of congestion.

10.- The cutaneous eruption of the two diseases is dissimilar. In typhoid fever the rose spots [illegible]

slightly elevated and isolated, disappear on pressure, and are found [illegible] are instantly followed by another set [illegible] dead body. In typhus the eruption is dark unchanged by pressure, [illegible] the disease.

11. In other [illegible] the disease [illegible] on a certain time, a crisis takes place, denoting that the disease is about to make a decided change, usually a profuse perspiration is the monitor; but in typhoid nothing of

the kind occurs.

12.- The duration of the two diseases is also different. Typhoid [illegible] from twenty to thirty days, sometimes longer. Typhus is less protracted, lasting usually about fourteen or fifteen days.

Typhoid fever must be considered, on the whole, a grave disease, and it must be obvious from all the foregoing considerations, that in any given [illegible] case of it, the [illegible] can very rarely if ever, be absolute, and positive. Patients often recover from the most desperate condition; in the mildest cases they are liable to the most perilous and fatal consequences. But [illegible] by a [illegible]

observance of all the circumstances that can influence the result - we can often determine the prognosis with much certainty. Sometimes the scales of life and death may hang equally balanced for many days; and no wisdom or skill can certainly predict which will finally preponderate. Favorable and unfavorable symptoms will be so combined as to baffle our efforts at prognosis; hope and fear are constant, and equal watchers at the bedside of the sick. If during the first [illegible] the [illegible] not exceed one hundred and ten, moderate drowsiness, no delirium, no subsultus tendinum, the patient gets sleep, diarrhoea and tympanitic distention

sion of the abdomen moderate the chances are favorable.

There are sometimes most distressing sequelae to this disease, and the most unfavorable is tubular consumption which is often developed soon afterwards.

Some cases are so mild that if left to the influence of the [illegible] moderately [illegible] favorable issue would happen itself.

The indications are to remove all sources of irritation, modify undue excitement and support the patient to strength. The first consists of proper hygienic [illegible]. The patient must be removed to a healthy place, the room darkened, but well ventilated, he must be attentively watched, and all objects likely to excite [illegible] [illegible] [illegible] [illegible].

Unlike most other fevers we have within our power no means by which the disease can be cut short, as it runs its allotted period of 3 or 4 weeks in spite of assiduous efforts to arrest it, and medicine is generally of little avail in the treatment, compared with proper hygienic measures and good nursing. As there is generally diarrhoea, or a strong susceptibility of the bowels to the action of medicines, active cathartics cannot be used. A spoonfull of castor oil, and if there is uneasiness, about the abdomen we may add to it 10-15 gtt of laudanum. After free evacuation of the bowels we must next attend to obviating febrile symptoms.

As the disease is marked by great debility, general bleeding will rarely be admitted or with great caution. They who insist that typhoid fever

is essentially inflammation of the brain, strive to subdue the fever by the means they would employ in that affection. Or if the face is flushed, the skin hot and dry, pulse full and hard with headache and tendency to delirium we may cautiously take a little blood. The hair should be shaved off and cold applications will be both agreeable and beneficial. Refrigerant diaphoretics should be used from the beginning as Nitrate of Potass, Soda water, lemonade, acid drinks unless too much diarrhoea, and when nervous symptoms appear, they may be combined with Nitric Ether, and if nausea and uneasiness of the stomach and bowels we may combine some preparation of opium. We must endeavor to procure quiet rest and sleep at

might, and for headache cold applications are generally most advantageous, and for uneasiness and pain in abdomen with flatulent distension, cover abdomen with warm poultice or give a few doses of Ob. Terebinth, which is highly recommended by Prof. Hoole. Often no other treatment will be demanded but support patients [illegible] with wine, wine whey-brandy-toddy, assafoetida or some other nervous stimulant. We must remember there either is, or is likely to be, inflammation and ulceration of Peyer's glands, and our attention must be directed to repressing abdominal disease, for which mercury cautiously used will be most advantageous. Two or three grs. of Hydrarg. cum Creta and the same of Pulv. Ipecac. every 6 hrs. will greatly assist in checking

inflammation of the intestinal glands and regulating the secretions. Generally about the second week, there will be symptoms denoting derangement of secretory functions as dry furred tongue, scanty urine &c. with sometimes [illegible] stupor and delirium, and to counteract which condition, nothing is so useful as mercury to gradually and gently affect the gums. It is also useful in preventing inflammation being set up in other parts, arresting the lesions of the intestines, and relieving tympanites. When there appear symptoms of the more advanced stage, as coma, stupor &c. we must resort to active stimulants as Carb. Amonia, brandy &c. with cold applications to the head, with blisters. I have seen several cases in which the patients lay in a perfectly in-

sensible and comatose conditions for a week and gradually recover through the assiduous use of blisters, cold to the head and Chlorate Potass internally as a diaphoretic.

For diarrhoea, astringents, as Kino, acetate of lead, opium, tannin &c. and in violent cases the following will be found highly useful. ℞

Ext. Nux Vomica gr. 2/3.
Argent. Nit. gr. 1/4
Pulv. Opii gr 1/4
Misce Ft. [illegible]

or ℞

Antim. Tart. grs IV.
Tinct. Opii ʒj
Camphor Mextr. ℥VI.

M.; S. A table spoon after each operation.

When there is evidence of perforation of the intestine, full doses of opium to restrain the peristaltic action of the intestines, & kept perfectly quiet. When any part has become inflamed and likely to slough from pressure, we must change the posture, bathe the parts with brandy, white of egg, and arrange that bed that pressure will be removed.

This & all other diseases must be treated on general principles; when there is undue excitement we must deplete, and then prostration must build up the system, and finally endeavor to "obviate the tendency to death."

Thesis
On
Rheumatism
by
Samuel Boyle

Rheumatism

Rheumatism in like inflammation: but it is inflammation of a peculiar or specific kind It is inflammation of the fibrous tissue, and it may therefore attack any part of the human frame where fibrous tissues exist. There are two forms of Rheumatism, The acute and chronic Acute Rheumatism is a blood disease. The circulating blood carries with it a poisonous material, which by virtue of some mutual or elective affinity, falls upon the fibrous tissues in particular, visiting and quelling them with a

variableness that resembles caprice, but is ruled, no doubt, by definable laws, to us, as yet, unknown. This disease is formidable from the suffering it causes, from the intensity of the fever, and from the danger which is so frequently produced by it to the heart. The earliest symptoms of it are usually slight fever, with stiffness and aching pain of the limbs, following exposure to cold and damp. The pain quickly increases, and in a short time is accompanied by swelling and great tenderness of one or more

of the large joints, together with much constitutional disturbance. When the disease is established, the patient presents a pitiable spectacle of helpless suffering. He is very restless, yet dare not or even cannot move; the pain in the affected joints is so agonizing, that only the weight of the bedclothes can barely be borne; the skin is generally bathed in sweat, of a disagreeable acid or sour odour; the pulse is full, bounding, and quick; there is constipation; the tongue is moist, but furred;

The saliva is acid; and the urine is high colored, scanty, of high specific gravity, very acid, and loaded with uric acid, or more frequently with urates. It has been lately proven that the deposits formerly regarded as consisting of urate of ammonia, have a variable composition; being made up of the urates or lithates of lime, potash, and soda. A remarkable feature in this disease is the tendency to metastasis. The inflammation will appear, in one joint, suddenly, and as suddenly subside

in another which it previously occupied: and then, perhaps it will jump back again to its old quarters. In very many instances, however, it invades fresh joints without wholly ceasing, and sometimes even without diminishing at all, in those formerly affected. It may visit in this way every large joint in the body, and even seize upon some of the smaller ones; or it may possess nearly all of them at once. It is most commonly seen to affect the ankles and knees, the knuckles, wrists, and elbows. But the most serious change is when it shifts its

place, or extends to the membranes of the heart. Rheumatic fever may also, but more rarely, be complicated with bronchitis, pleurisy, pneumonia, or even with inflammation of the brain or its membranes. When uncomplicated, its average duration is from ten or twelve days to eighteen or twenty. When death occurs it is almost always from the cardiac inflammation. When recovery takes place after the heart has been affected, the patient has very often a sad time in store for him - future bad health, palpitation, dyspnea

and dropsy. The great majority of cases of acute rheumatism occur in persons between fifteen and forty years of age.

Treatment— A great number of different plans have been recommended in this disease Lemon juice, in two or three ounce doses, repeated three or four times a day, has been recommended by Dr Owen Rees who considers that the citric acid undergoes changes in the stomach, supplying oxygen to such elements as tend to produce uric acid, and inducing thereby the formation of urea and carbonic acid instead The Bicarbonate of Potash in

solution has been largely and fairly tried by Dr Garrod who has administered it in the average quantity of two scruples, repeated every two hours, by night and by day, for several days together. Of 51 cases so treated, the average duration under treatment was between six and seven days, and the average duration of the whole disease was between thirteen and fourteen days. The medicine soon rendered the urine alkaline. It had no injurious influence on the bowels, or on the bladder. It seemed rapidly to calm the pulse,

and to allay the febrile heat.
In no instance did any
affection of the heart arise
if the patient had been
forty-eight hours under its
influence. Other physicians
give the nitrate, or the acetate,
or the citrate of potash. The diet
should at first be low, consisting
of arrowroot, sago, &c
Secondly there are signs of
depression, beef tea, milk and
lime-water or prepared milk
may be administered; and
if necessary, wine, especially
sherry in soda water. In the
early stages, when there is
much thirst, a refreshing
saline drink will be beneficial.
Perfect rest must in all cases
be enjoined, and all sources

of mental anxiety should, if possible, be removed. With regard to the local remedies, great relief is often experienced from wrapping the affected joints in cotton wool and oiled silk, by which a sort of local vapor bath is formed. When the wrists or ankles are chiefly affected, frequently soaking them in a hot alkaline bath; or from fomenting them with water to which the bicarbonate of soda is has been added affords great relief. Should any symptoms of cardiac affection arise, such as violent and irregular action of the heart, precordial pain, altered character of the sounds and fever, leeches, or

cupping over the region of the heart, or resort to general bleeding, and quickly get the system under the influence of mercury. The Iodide of potassium, guaiacum, colchicum may also prove beneficial.

Chronic Rheumatism

This is sometimes the sequel of acute, but more commonly a separate constitutional affection, coming quite independently of any previous acute attack. It is apt to follow gonorrhea; hence one variety of this disease has been termed gonorrheal rheumatism. The fibrous tissues around the joints, or the fibrous envelops of the nerves

or the aponeurotic sheaths of the muscles, the fascia, and tendons, or the periosteum, are the parts which suffer. In any case, there is at first little constitutional disturbance; but the sufferer is constantly annoyed, and his existence made miserable with chronic pains, causing him to be restless at night, and destroying all comfort during the day. In some instances, the pains are worse at night, being aggravated by the warmth of the bed; in others, warmth affords the greatest relief; the former is usually the case when the blood is circulating a poisonous material through

the system, as in venereal rheumatism, or in that due to derangement of the digestive organs and secretions; the latter, in rheumatism of an erratic kind, dependent on colds. There are one or two different forms of chronic rheumatism. Thus, rheumatic inflammation of the lumbar fascia is termed lumbago: the pain is referred to the muscles on one or both sides of the loins, and is increased by every movement of the back. When the intercostal muscles are affected, the disease is termed pleurodynia. (Treatment.) It is always necessary to attend to the general health, as by doing so the disease

with often be materially mi-
-tigated. There are several
special remedies which give
relief, the best being the Iodide
of potassium. If the secretions
are very acid, liquor potassæ
should be combined with it.
The mistura guaiaci, cod liver
oil, cinchona, liquor potassæ
and bark, the oil of turpentine,
colchicum, and the hydro-
chlorate of ammonia with
bark, have also been recom
-mended. Hot water, or hot
air, or vapor baths - either
plain, or alkaline, or medicated
with sulphur - are often very
serviceable in this disease,
especially when the pains
are severe. During the
intervals of the attack the

if, a salt water sponge bath
should be employed every
morning. Local applications
to the painful parts, such as
blisters of Iodine paint,
and stimulating liniments
often give temporary relief.
In lumbago a large bella-
-donna plaster, or the emp-
-lastrum ferri, should be
applied over the whole loins.
The internal application
of sulphur - either powdered
or as an ointment - with
bandages of new flannel;
the latter being again
covered with oiled silk,
to increase the warmth,
and obviate any disagreeable
smell, may prove beneficial.
When the pains are decidedly

relieved by heat, acupuncture
is said always to give ease,
and often to effect a cure..
Persons who are much troubled
by this wearing complaint,
and who can afford to live
where they please, would do
well to take up their residence
in a warm climate. Wherever
they may be, such patients should
be protected against atmospheric
vicissitudes by warm clothing:
They should wear flannel,
and beware of exposure to
damp and cold.. They should
also be very careful in their
diet:

An
Inaugural Dissertation
on
"Scarlet Fever"

submitted to the examination
of the
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Scarlet Fever.

Is a febrile disease of a contagious nature having a scarlet efflorescence of the skin and mucous membrane of the fauces and tongue

Scarlatina is divided into Scarlatina simplex Scarlatina anginosa and Scarlatina maligna

Scarlatina simplex is ushered in with the usual symptoms of fever such as cold chills shiverings nausea and sometimes vomiting with pain in the head, back, limbs and with hot skin frequent pulse on the second day there is to be seen in many cases a fine scarlet efflorescence on the face neck and breast then gradually extending over the entire trunk and limbs. It at first consists of innumerable red spots separated by interstices of the natural color the spots soon coalece so that in a few hours the redness becomes universal. The skin is dried

pale by pressure but the color immediately
returns when the pressure is removed after
the lapse of one or two days the efflorescence
again becomes partial and is in irregular
and does not disappear on pressure the skin
is rough to the touch because the cutaneous
papilla are enlarged and studded sometimes
sometimes with small miliary vesicles
The rash generally begins to decline on the
fifth and very indistinct on the sixth day
and the scarlet holly disappears by the eighth
day desquamation of the cuticle generally
begins on the parts first affected about the
end of the fifth or sixth day and sometimes
sooner and to the entire body, the
cuticle separates in the form of scales or
scurf from the body and limbs and in
scales from the hands and feet. The mucous
membranes as I have before stated are more

or less inflamed in the eyelids the lips the edges of the tongue the soft palate the pharynx and nostrils are more or less inflamed the tonsils are slightly enlarged and sometimes there is a difficulty in swallowing. The papilla of the tongue are elongated and project there is seen bright red points through the white mucous which covers its surface or the whole tongue is of a bright red color with prominency of the papilla The appearance of the tongue is like a white strawberry and in the second place to that of the red variety the febrile symptoms subside with the rash leaving in nearly every case the patient in a very debilitated condition Although the eruption in scarlet fever usually occurs on the second day yet there are some exceptions to the rule For during the

prevalence of scarlet fever in the south part of York Co. Pa. in 1847 my preceptor Dr. Jas. Gerry told me that many of his patients complained of a slight sore throat and there was a suspicious appearance of the tongue and with a little disturbance of the general health for three four or even five days and then the eruption made its appearance and terminated favorably

Scarlatina Anginosa. In this variety of scarlet fever the affection of the fauces are prominent such as stiffness of jaws with soreness of the throat and pain in swallowing are often felt until about the second day and the eruption is later in its appearance than in the simple variety usually appearing on the third day and as a general thing is not so copious and at the sametime not so much diffused the points are often distict and

there can be but few spots on the patient and sometimes the eruption is in patches with intervening portions of skin of the natural color then again the rash may be as general and violent as in the simple form often it breaks out sparcely then disappears and thus it may appear and disappear once twice or even thrice The fever in Scarlatina anginosa is severe the pulse strong and there is more apt to be delirium and stupor and the inflammation of the fauces increases as the disease advances, and not unfrequently the eyes are red and irritable though not so often watery as is the case in measles The patient sometimes sneezes has a dry cough and a guttural voice and sometimes hemorrhage from the nostrils. When the fauces are examined the tonsils uvula and soft palate are found swollen and of a deep

red color and patches of concrete exudation
resembling pseudo membrane which may
be mistaken for ulceration of the mucous
membrane these patches are of a dirty white
yellowish or ash color and very often is
extensive covering the surface of the fauces
and spreading into the pharynx as far as
can be seen they are soft and can be scraped
off and when they are removed the surface is
found red but there is no organic change or
ulcerated and gangrenous parts or surfaces
may be hid by these patches of coagulable
lymph these patches may extend into the
larynx and bring on symptoms of pseudo
membranous croup which is very rare there is
often a very offensive odor of the breath and
much swelling of the external parts near the
parotid and submaxillary gland and veins
sometimes the tumefaction is very great.

It has been thought that the cellular tissue is the seat of the disease or the lymphatic glands the external swelling is hard and painful so much so that the patient is not able to open his mouth so that an examination of the fauces can be made, deglutition is difficult and painful and when the patient attempts to swallow liquids they frequently return through the nostrils and it not unfrequently happens that the internal parts are so much swelled as to interfere with respiration. The patient is troubled with a viscid secretion from the fauces which he cannot swallow and at the same time finds it very difficult to discharge it from the mouth the lips are cracked and invested in places with crusts which are painful to the patient when parted and the mucous membrane of the nostrils become implicated in the

disease the nasal passages being closed by the swelling and the crusts which form upon their surfaces compells the patient in many instances to breath through the mouth which produces dryness of the tongue and lips at a more advanced stage a yellow and very offensive liquid is often discharged from the nostrils which is sometimes very acrid and excoriating the orifices, a similar secretion takes place from the fauces which is swallowed and probably is one of the chief causes of the irritation of the stomach and of diarrhea which sets in, near the close of the disease, the discharge from the bowles is also acrid which excoriates the anus the tongue is apt to lose its pin at an early period becoming of a deep red color and smooth glossy then again it may be rough with projected papillæ

yed papilla the incrustations ... The
fauces separate spontaneously or is absorb-
ed leaving the surface red. Though not as a
general thing excavated the eruptive pa-
des rather later than in the Scarlatina sim-
plex the fever and sore throat continue though
mild for a few days after desquamation
has commenced, if there has been much
swelling about the neck and throat recovery
is much delayed by the suppuration which
takes place; then it often happens that vari-
ous secondary affections occur which protract
the disease and add considerably to the da-
nger this variety is much more dangerous than
Scarlatina simplex recovery taking place
after a long struggle of the system to repair
organic mischief yet the greater proportion of
cases the patient does well and the disease subsid-
es at the regular period without accident.

Scarlatina Maligna. This name is applied to cases of very great violence in which the system is overwhelmed by the power of the disease the simple or anginose variety may assume a very malignant character the affection of the throat is not essential to the malignancy of the disease of the disease although the throat may suffer very greatly In some instances the patient seems prostrated in the first stage it is not very uncommon that cases are met with when scarlet fever is very prevalent in which the patient is attacked at once either with comatose symptoms or oppression faintness anxiety great; pulse slender, feeble frequent rather irregular the surface cool or cool in one place and hot in another, respiration is slow or it may be hurried and irregular, face pale or livid and muscles almost powerless. There is often feeble attempts at reaction, febrile

heat may be somewhat developed but soon disappears and there may be some specks of a violet color visible as though they were struggling through the skin but the resistance of the system soon ceases and the patient dies about the third day. When the patient is strong and vigorous and the system in a healthy condition or when the early symptoms are those of the anginose variety the signs of malignancy in such cases are violent pains in the loins and extremities the disposition to delirium and stupor are great the pulse [illegible] but not less frequent a later appearance of the eruption which does not appear sometimes until the fourth day its more reluctant or partial efflorescence and tends rather to be of a darker hue the redness in the fauces is deeper and rather purple and as the disease advances the symptoms take on a

more malignant character the pulse feeble & skin less regularly heated the eruption appears and disappears and is of a livid purple color petechie echimoses are seen the pseudo membranous exudation is of a darker hue almost black, the whole throat is of a deep red and gangrenous eschars and deep ulceration affecting the soft parts the patient has a fetid breath, tongue is brown, teeth and lips are incrusted with sordes, blood oozes from fissures in the lips and tongue, the urine is sometimes bloody and we may have hemorrhage from the mucous surfaces, exhausting diarrhea sets in gangrenous eschars form on the rectum and hips at length collapse comes on, features [illegible] sunk the expression ghastly skin cold and clamy, pulse fluttering involuntary stools and finely death comes on in the close of the first or in the course of the

second week sometimes the patient is conduted through all these unfavorable symptoms and then with a shattered system has often to struggle on with exhausting abscesses ulcers alvine discharges which frequently carry off the patient though he may struggle through these and be restored to health It can be said as regards this variety of scarlet fever there is every gradation of malignancy from the sleightest symptoms of the simple form down to the most deadly concentration in those cases which sink under the first touch of the disease.

Scarlatina without Eruption it is certain that cases of fever without sore throat often occur during the prevalence of scarlet fever having all the symptoms and runing the exact course of that disease whether in the mild, anginosa or malignant forms with the exception that

the eruption is vanishing and it is stated that such cases are capable of imparting the disease.

Sequele. Scarlet Fever is a disease that leaves a long train of evils behind the most common are abscesses which form near the parotid and submaxillary glands these are often very exhausting and sometimes these abscesses are so severe as to take the life of the patient sometimes abscesses open into the external meatus and then the patient surfers long and obstinate discharges of pus from the ear distroying the bones of the ear and if the abscess is in the tympanum the membrana tympani is very apt to be ulcerated Again in some cases the Eustachian tube is closed by union after ulceration or it may be closed by inflammatory thickening of its coats causing partial deafness the

nostrils may be similarly affected the patient may also suffer from abscesses of the joints and testis, scarlet fever may attack the bowls producing Diarrhea which may wear out the patient sometimes it affects the stomach producing gastro enteritis the serous membranes are often attacked with inflamation in the progress of the disease or during its decline encephalitis, pleuritis, peritonitis be added to its lagacies bronchial diseases is not so common in scarlatina as in measles yet it may occur. There is pain and swelling of the large joints resembling rhumatism but the most serious of all is dropsy the patient is most liable to it during desquamation and for a considerable time afterwards it is in the form of anasarca, ascites, hydrothorax and hydrocephalus, heaviness approaching to stupor are the signs of cerebral

disease the affection almost always yields to prompt treatment although when the brain or heart are affected the danger is increased and if there is serous effusion into the submucous cellular tissue of the glottis it may affect the kidneys producing albuminarious urine and is associated with that state of the kidneys which has been observed in the early stage of Brights disease though this is not always the case scarlet fever has the credit of curing diseases of the skin cutaneous eruptions and nervous affections Anatomical Characters. sometimes there is no appearance of the eruption; and sometimes there may be seen a peculiar livid color of the skin after death the redness sometimes disappears after death from the fauces though it often continues if the disease has continued long even beyond the thi

ed day and the concrete exudation extends through the pharynx even to the esophagus but very seldom into the larynx many of the interior organs are congested and if there is inflamation of any tissue supervened the effects can be seen after death, the intestinal follicles are enlarged and softened though no so severe as in typhoid fever. The blood is in different states in different cases, in some thick in others watery in some red in others dark in some liquid in others it is coagulated the red corpuscles are increased.

Causes. Scarlet fever is contageous the cause generally operates through the medium of the atmosphere the disease often occurs epidemically and confined to small districts of country a single city or part of a city the epidemic influence differs

greatly in its effects, at one time it gives ri
se to a very mild form of the disease in an-
other to a violent form of the disease and
imparting in others an asthenic character in
one epidemic the patients almost all wec
ver, in another great numbers perish in
one bleeding is well born, in another it is
dangerous there are persons who appear in
tirely insusceptible to its cause and very
often there are members of the same family
exposed to the cause and yet do not take
disease and yet there are others of the same family
who take the disease upon the slightest expo
sure to the cause, no age is exempt from the
attack of the disease children are more lia
ble to the disease than adults the susceptibili
ty seems to diminish after puberty upwards
and woman are most apt to be affected than
men this may arise from the fact that they

are frequently more exposed to the disease there are persons so susceptible to the disease that every time they come within reach of the influence of the disease are troubled with sore throat the disease is thought to be most frequent in autumn and winter generally disease occurs once to the same individual the period of incubation varies from two or three days to two weeks yet generally about three or four days.

Diagnosis. In the early and before the eruption Scarlatina may be very likely mistaken for many other febrile the most common symptoms are an extraordinary frequency of pulse and redness in the fauces after the eruption has come out it may be mistaken for measles it may be diagnosed from measles by the abscence of catarral symptoms and by the occurrence of the rash

on the second day instead of the fourth or fifth day and by the anginose affection and peculiarity of the rash which is of a bright red and puncturated at first and more uniform at last having no crescentic arrangement of the rubeolous eruption and without its roughness and from measles by the abscence of cough and sneezing and from roseola by the severeity of the constitutional symptoms irregular semilunar patches of measles.

Prognosis, Is very uncertain in this disease some of the mildest cases the disease assumes the most malignant form when the attending physician may have entertained no unfavorable terminus again cases of a malignant character have and do often terminate favorably again cases may reach convalescence under favorable circumstances

is liable to the more serious diseases of a secondary nature there is in some persons a great tendency to the most violent form of scarlatina it may rage with great malignancy in some families while those residing next may have the disease in a mild form, the disease is considered dangerous in pregnancy and in the puerperal state. The disease is thought exceedingly apt to be fatal, with old men If the epidemic is prevailing in a mild form we are apt to be more hopeful of a happy result, than if it were prevailing in a malignant form amongst the unfavorable signs are a late appearance and considerable deficiency or sudden retrocession of the eruption together with other bad symptoms as continued delirium or profound coma, the rash is purple petechiæ hemorrhage a livid appearance of the fauces with gangrenous

sloughs extention of the pseudo membran-
ous exudation into the Larynx the occurr-
nce of severe intercurrent inflamation g-
angrenous extremities of the sacrum and
hips where pressed upon and great prost-
ration as is shown by a feeble pulse, cold
skin and involuntary discharges the
absence of the above symptoms and the g-
radual subsidence of the disease are favo-
able signs, yet nothing of the kind can
be relied on because the disease is so very
liable to change that the prognosis in
scarlet fever should always be given with
care.

Treatment. When the symptoms are very
mild there is no need of doing much but
keep the bowles open give cooling drinks reg-
ulate the diet and keep the apartment ven-
tilated and comfortable a gentle emetic

in the first outset of the disease often modifies the disease in the first onset although it may not be required in every case yet it does no harm if given in the first stage as it is impossible to foresee the future course of the disease. The emetic should be followed by a dose of calomel and if this should not operate in four or five hours give castor oil or magnesia or one of the saline cathartics afterwards the bowles should be kept moderately open if necessary by cathartics which should be given with strict reference to the case magnesia should be given when the energies of the system are strong if there is nausea and vomiting give a Seidlitz powder, give magnesia when there there is acidity of the primae viae and castor oil when there is pain in the abdomon and rhubarb then the system will not admit of watery

purgations when there is diarrhea use castor oil with laudanum this clenses the bowles of the secretions which are swallowed rendering the bowles less sensible of irritant impressions, yet drastic purgatives should never be permited, bleeding should be used with great care as the cause in some epidemics are less depressing than in others, therefore bleeding should be use with much caution and only when there is signs of much inflamation of some vital organ exists and threaten danger it is hardly ever used for inflamation of the fauces, as local depletion by leeches or cups are preferable for they are better, should there be a malignancy of the disease leeches and cups should not be used. But when used the patient should be placed in a sitting posture and stop the bleeding

as soon as the [illegible] is found to give relief when it [illegible] serous inflamation with the disease cupping may be employed with some good effect when there is much external swelling, leeching may be used yet we should learn first if the pulse is sufficiently strong in convulsions of any of the stages, it is often prudent to apply leeches to the temples and behind the ears, when the skin is hot and dry and the patient has no chills cold sponging is good it allays heat of skin and pulse and gives rest and comfort to the patient in some cases warm water may be substituted for the cold water, when the fever is well established internal refrigerant treatment should be used the patient may be permitted to drink cold water moderately and to hold ice in

the mouth if he desire it also small doses of the neutral mixture should be given every hour in the day or solution of acetate of ammonia or muriate of ammonia to which when the stomach is quite retentive a small dose of tartar emetic may be added when the stomach is irritable the effervescing draught should be given. If there be nervous symptoms they may be counteracted by the addition to the diaphoretics just mentioned of sweet spirits of nitre Hoffmans anodyne or camphor water if there be a sour smell from the patient he may take bicarbonate of soda three or four times per day. If the pulse is very strong tincture of digitalis in doses of from five to eight drops every four hours. If there should be debility as is often the case at first or during the course of the disease.

whenever they are seen we should resort immediately to tonics as stimulants such as the sulphate of quinine disolved in one of the dilute mineral acids or the compound infusion of Peruvian bark but should the debility be very great we may use capsicum or carbonate of ammonia oil of turpentine and wine whey if there should be nervous symptoms with debility musk, assafetida or valerian, animal broths or jellies should be used. Swelling of the throat or even comatose or delirious symptoms should not prevent us from using the measures and even when there are evident signs of debility. If the eruption comes out slowly it should be assisted by means of the hot bath and the active rubefacients. The chlorate of potassa in proportion of a drachm to a pint of water as a drink from one to two pints may

be given in a day chlorine is often used
Local Remedies in slight injections of the
throat demulcents, slightly astringent a
saline gargles, may be used, such as flax
seed or slippery elm water acidulated
with sulphuric acid infusion of red
roses nitre. In pseudo-membranous
or when there is gangrenous patches
in the the fauces and the mucous mem-
brane is red and even dark. The infusion
of capsicum or powdered red pepper di-
ffused in water or even in mint thought
vinegar is the best mixed with water in
children it may be applied by means
of a camel's hair pencil, or a strong solu-
on of sulphate of zinc containing fifteen
grains to the fluidounce of water to be
applied to the patches if the patches
appear to pass into the larynx penciling

with the nitrate of silver will be appropriate if there is offensive odor of the breath chlorite of soda, chlorine or of pyroligneous acid in gargle is appropriate local depletion may be imployed by means of blisters or leeches or a large emollient poultice rubefacients may be used such as turpentine mixed with olive oil, tincture of capsicum or the liniment of ammonia. While the patient is convalescing he should be careful to guard against exposure to cold air & keep the bowles regularly open should the patient be feeble and appetite languid then the stomach should be invigorated by the use of mineral acids quinia the diet should be tonic and nutritious when the fever has subsided. The sequela of the disease requires careful attention should the external parts about the neck suppurate emollient poultices should at once be applied and the strength supported by the

use of tonics and a nutritious diet diarrhea and inflamitory affections which set in, must be treated as though they were original but the debilitated condition of the system should be borne in mind if diarrhea should commence after a mild attack depletion is well born the poison having been removed if cerebrial symptoms arise take blood from the arm

Preventative. Children should never be allowed to go where they may contract the those who have children in charge should remember that the liabilities to contract the disease as the child advances in age diminishes

W. H. Manifold

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An
Inaugural Dissertation
on
"The Efficacy of Remedies in &c;
submitted to the examination
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Provost, Regents & Faculty
of Physic,
of the
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Doctor of Medicine
by
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of
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Anno Domini 1861.

Præfatio.

Ut mos Scholæ Medicinæ Facultati aliquid, hoc tempore, offere exceptum ex fecundissimo Scientiæ agro, Ego, morem consuetudini gerens, multâ cum diffidentia, hæc offero. Itaque præcor boni, indulgentiam lectoris et spero ut in futuro aliquid acceptabilius Præclaræ Professioni objiciam.

Hujus Thesis propositiones non sunt novæ et, haud puto hæc subjugenda, attentionem imperaturam, at magis, indulgentiam.

Præterea, ut subjecta, haclāla a me, sunt curriculi, præsertim Professoris nostri in Materiâ medicâ Edwardi Warren, Ego hæc scripta, illi, præditō omni cum Scientiâ atque eruditione, dedico, tanquam signum æstimationis meæ illius bonitatis, Scientiæ ac devotionis.

Die Nonâ Februarii,

Anno Domini, MDCCCIXI.

Joannes Nicholas Forman A.B.

Efficacy of certain remedies.

In our researches to discover and fix, the period when remedies were first applied for the alleviation of bodily suffering, we are soon lost in conjecture, or involved in fable; we are unable to reach the period in any country, when the inhabitants were destitute of medical resources, and we find among the most uncivilized tribes, that Medicine is cherished as a blessing and practised as an art, as by the inhabitants of New Holland and New Zealand, by those of Lapland and Greenland, of North America and of the interior of Africa. The personal feelings of the sufferer, and the anxiety of those about him, must, in the rudest stages of Society, have incited a spirit of industry, and, research to procure

alleviation. We know by the earliest records, that the Ancients were in the possession of many powerful remedies.

It is impossible to cast our eyes over such multiplied groups of substances with which our cabinets are overwhelmed without being forcibly struck with the palpable absurdity of some — the disgusting and loathsome nature of others — the total want of activity in many — and the uncertain and precarious reputation of all — or, without feeling an eager curiosity to inquire from the combinations of what causes it can have happened, that substances, at one period in the highest esteem, and of generally acknowledged utility, have fallen into total neglect and disrepute, — why others, of humble pretentions and little significance, have maintained their ground for so many centuries; and, on what account, materials, of no energy whatever, have received the indisputable sanction and unqualified

support, of the best and wisest practitioners of the age. That such fluctuations in opinion and versatility in practice should have produced, even in the most candid and learned observers, an unfavourable impression with regard to the general efficacy of medicines can hardly excite our astonishment, much less our indignation; nor can we be surprised to find, that another portion of mankind have at once arraigned Physic as a fallacious art, or derided it as a composition of error and fraud. They ask - and, it must be confessed, that they ask with reason - what pledge can be afforded them, that the boasted remedies of the present day will not, like their predecessors, fall into disrepute and in their turn serve only as humiliating memorials of the credulity and infatuations of the physicians who commended and prescribed them?

To vindicate our Art from such imputations,

to give confidence to the wavering and doubtful, and to point out what remedies Experience has tought us to rely on, I shall endeavor in the following remarks to aim at these points to hit the mark.

In the first place I shall speak of Cinchona. Cinchona justly ranks among the most useful and indispensible articles of Materia medica; the most esteemed of febrifuges, which acts especially in Ague, resembling several other remedies that Essentially belong to the nervous system, in being paroxysmal. Let us look for a moment, at its Early history and introduction into the list of the remedies of Mat. Med. In 1640, the Lady of the Count Cinchon, Viceroy of Peru, was affected with a tertian intermittent which resisted every mode of treatment that her physicians could devise. Being at length nearly exhausted by the disease, she was advised by the Governor of Loxa who had been acquainted with the febrifuge virtues of the bark by an indian, to use it as a remedy

for her Disease. She took it, and the complaint very soon disappeared. The event of this case spread its reputation rapidly throughout Spain. Through the exertions of those good and great men, the Jesuites, true benefactors of the human race, they carried it into Italy, where it was gratuitously distributed among the poor sick at Rome, by Cardinal de Luga and his physician Sebastian Baldo. This latter personage has the credit of having written the first work on this valuable remedy. Its fame now rapidly extended itself through France, Germany, obstinate England, &c, and although much opposed on all sides, the value of its powers was fully established on the testimony of almost universal Experience. The name Cichona was given this substance by Linnaeus in commemoration of the incident mentioned above. In the Cichona we have one of the very few specifics that we can boast of possessing, and that, unlike most other highly vaunted substances, so far from falling off from the account first given of its virtues, it has acquired on the

lapse of time an increase and stability of reputation.

This is a remedy to which we could never have been led by any process of reasoning. It is a matter of pure Empiricism. We know nothing of the seat or of the Essential nature of the disease; we are Equally in the dark as to the Modus Operandi of this bark in curing it; yet our knowledge of ague, upon the whole, Estimated in reference to its precision and practical bearing, is more satisfactory than many other Complaints, with the seat and nature of which we are much better acquainted. The group of symptoms is so distinct, that we have no trouble or doubt as to the diagnosis; and experience has taught us a remedy which is all but infallible.

Mercury (Hydrargyrum) and its compounds will next engage our attention and I shall speak only of its use in a single disease, viz Syphylis. It is an infectious Disease, communicable by coition; or by the contact of parts that are only lined with a thin Epidermis, as the lips, nipple, &c.

It may be transmitted by generation and makes its first appearance by a chancre, followed sooner or latter by a bubo. The chancre is a primary symptom or Sore; but there are others, which are secondary or constitutional. These are:- ulcers in the throat; copper coloured blotches on the skin, pains in the bones, nodes, &c.

The origin of this filthy disease is unknown. It is believed to have been introduced into Europe from America at the end of the 15th Century. Its progress is extremely various, as well as its duration, which is often unlimited if left to itself. By some Mercury is considered by some the Specific Remedy, by others, it is considered as the best remedy, but I must say the remedy admits of cure without it. There is not that Equanimity about Mercury as there is about other remedies in other diseases. But as far as I can say there is not the least Doubt about Mercury standing as the specific is this truely loathsome disease, as efficacious a remedy as can be given for its amelioration. For in all the cases of this disease that I have

seen treated or treated myself Mercury as the remedy and as to its efficacy I had not the least reason to doubt.

Of its form of administering it I will not insist upon but I do say that care must be had that it must not be shoveled into the patients system without any regard to his Constitution and other indications. The rational use of this mineral has always been the great sheet-Anchor of the practitioner. Again almost any antisyphalitic Composition, the use of which is attended with success, probably contains Mercury united with diaphoretics or other medicines.

It is generally sufficient to keep the mouth sore for a fortnight for the cure of Chancre, for venereal Sore-throat and other recent Constitutional symptoms eight or ten weeks will be required; and, of course a longer time, if these symptoms which I have spoken of above, continue obstinate and do not yeild until the Mercury has been discontinued and tonics and sudorifics

have been administred.

Different hypotheses have been offered as to the modus operandi, Some will have it to be — Mechanical as Astruc (De morb. Ven.) as Davy, (Medic. Transact); others, Chemical, as Smeddiam; others, Dynamical, as Hecker, Schenc, Rheil. Mr Hunter (Treatise on the Venereal Disease) accounts for its beneficial effects in Syphylis, by saying it produces an irritation of a different kind to that caused by the Venereal Disease, and that it counteracts the latter by destroying the diseased action of the living parts. One fact is tolerably well Established - viz, that the cure of Venereal diseases without the aid of Mercury is much slower and less secure against relapses than a mercurial treatment. Heunen, Rose, Guthrie and Thomson, advise the employment of moderate quantities of mercury when the disease does not readily subside under the use of ordinary methods of treatment. But under some special circumstances that contraindicate the use of mercury, it is advisible to affect the mouth slightly in most

forms of the disease. By being careful in following some cautions that we injure not instead of healing our patient, who, on account of some peculiar diasthesis, might be subjected to much inconvenience and unnecessary trouble.

Bearing these things in mind we can be sure of doing him no harm.

It is to be remarked in the first place that some of the worst and most intractable forms of venereal disease occur in scrofulous subjects; and in such, Mercury is in general prejudicial. Mr Colles (Pract. Obs. on Ven. dis.) however, denies the baneful influence of Mercury in Scrofula, and advises its use for the cure of Syphilis in scrofulous subjects; but he admits that the profession generally entertain a contrary opinion.

In the second place: Condition of the primary sore; another point deserving attention, in deciding on the use of mercury, is the condition of the primary sore; if it be much inflamed, or of an irritable nature - if it be of the kind called phagedenic, or at length disposed to slough - Mercury must be carefully

, avoided, as it increases the disposition to sloughing.

In the third place, Extreme debility in hectic fever. This condition is usually believed to contra-indicate the Employment of mercury. But Mr. Colles asserts that a patient, affected with secondary symptoms, even though extremely attenuated, and, as it were, melting away under the effects of hectic, can with perfect safety and advantage, at once commence a course of Mercury; by which not only shall his venereal symptoms be removed, but at the same time his general health be reestab-lished.

In connection with this subject I shall speak of a remedy very efficacious in the tertiary form of this disease, and in the complaint known as Goitre. It is Iodine (Iodinum), one of the most widely disseminated of the elementary bodies. It was detected in a great number of natural bodies, & Especially in fuci and sponges. These had long been celebrated for the cure of goitre. Coindet,

of Geneva, finding that the Varech (fucus Vesiculosus) had been used as a remedy for Goitre in the same way as burnt Sponge. Suspected that the Iodine, which both contain was the source of their curative properties. He accordingly put his conjectures to the test of experiment, and not without astonishing success. After the year 1820 this new remedy became famous and was employed not only for its original purpose, but for various and discordant objects. Many of which it failed to accomplish. The Compounds of Iodine now stands second in value to Mercury alone among the alterive medicines. As I mentioned before it is an efficacious remedy in Constitutional Syphilis, as proved by the Experience of Dr Robt. Williams of London 1831., Dr Wallace of Dublin. Finally its peculiar power of curing deep-seated syphilitic diseases of the integuments, cellular tissues, and bones was Established in the confidence of the Medical profession by M. Ricord.

Mercury is incompetent to cure the tertiary symptoms of Syphilis, and, indeed, so often aggrevates them,

that they have been regarded by some persons as effects of Chronic Mercurial, rather than Syphilitic poisoning. However this may be, such Symptoms are cured by Iodide of Potassium more frequently, and with more certainty, than by another remedy. "When given to cure the appropriate symptoms, says Ricord, a marked and decided improvement rarely fails to appear during the Second week of the treatment and sometimes sooner". "The tubercles are absorbed, the ulcers become clean, the suppuration diminishes, the osteocopic pains cease and the osseous tumors, if they are not permanently indurated, soon begin to take on resolution".

The modus operandi of this compound of Iodine in curing Constitutional syphilis presents an extremely interesting problem. Although the question cannot be considered as thoroughly solved, it may be considered highly probable that the Medicine is Chiefly curative by virtue of its power of liberating the Mercury, which an antecedent Mercurial treatment has accumulated in the system.

It appears also highly probable that its influence is derived, in part, at least, from the state of minute division in which [illegible] exists, and the increased facility it thence derives for penetrating the ultimate Elements of the tissues. Yet it must not be supposed that Iodide of Potas. is incompetent to cure tertiary Syphilis without the intervention of mercury. Ricord has pronounced Emphatically this notion a mistaken one, although he believes that a previous mercurial course is best fulfilled to secure the favourable action of the Salt (Lect. Am. Ed). It has also been proved erroneous by Dr Wasping of Stockholm. M. Rodet, of Lyons, it may also be remarked, maintains that Iodide of Potassium is most efficious, when no other treatment has preceded it.

The influence of Iodine upon the function of nutrition is strikingly illustrated by its efficacy in the cure of hypertrophy, and the removal of unorganized deposits. Indeed, as is well known, the virtues of Iodine were earliest recogni

zed in one of this class of affections. Goitre.

It may be presumed that its operation is most manifest in proportion as the increased size of an organ depends upon nutrition rather than inflammatory action, although it sometimes acts in the latter cases with very happy results.

In Goitre its virtues are most signally displayed. But, as Rampshold and others have pointed out; there are two forms of disease, confounded under the name of Goitre; the one on which the tumor is formed of Cysts, containing a ligquid; while the other is simply a hypertrophy of the gland with its cellular tisue and fat. The latter variety is readily cured by Iodine, but the former is not so. These statements will explain the different degrees of success obtained by Iodine by persons who were not aware that tumors of the thyroid body, are not always of the same nature.

If in order to determine the nature of the curative influence exercised by Iodine, we survey the whole

field in which this substance and its compounds operate therapeutically, we are struck by the fact that, like other alteratives, its operation is gradual and usually unaccompanied by active Phenomena; again, if we turn to other diseases, in which its action is useful as tertiary Syphilis we may conjecture that it brings about the discharge of some materies morbi from the System.

Finally let us consider the Efficacy of the substance, Sulphur, in various skin diseases.

Sulphur is a simple substance very widely diffused in nature. It has been known from the remotest antiquity. It was often very much used in various diseases by the old Physicians. Pliny says of it that in combination with resins, it removes lichenous and leprous eruptions from the face. Dioscorides gives almost the same account as Pliny, but dwells more particularly on the use of the medicine in Cutaneous Diseases and especially in the Itch. Paul of Egina speaks of it as "a wonderful remedy for scabious complaints".

The complaint in which we see the certain efficacy

efficacy of the remedy in question is known by the name of Scabies or Psora, a contagious eruption of very minute pimples- pustular, vesicular, papular, intermixed and alternating, itching intolerably and terminating in scabs. It seems to be connected with an insect of the genus Acarus, called accordinly Acarus Scabiei. The existence of this Ectozoon had long been affirmed and denied; but the vexed question, has at length been set at rest by the public demonstration of the Acarus by a Mr. Renucci to a number of medical practioners at Paris. It is a microscopic insect and is the undoubted cause of this very "unfashionable" and loathsome Complaint. The ancient custom of treating this disease by Sulphur, which has already been adverted to, continues to the present Day. The principal modifications which modern physicians have introduced into the method have arisen from the recognition of the complete inutility of Sulphur as an "internal" remedy for itch and from the discovery of the itch insect (acarus scabiei)

whose destruction by its means constitutes the cure of the disease. These two points being settled, the use of the remedy became simplified, and the time necessary for its affecting a cure was singularly abridged. As long ago as in 1812-13 Helmerich and also Burdin, cured the Itch; the one in 18 hours, and the other in about half that time by means of vigorous and repeated frictions with Sulphur Ointment aided by warm baths (Bull. de Thérap.). Subsequently, however, the principle upon which the method was effectual, having been lost sight of, the method itself fell into disuse and the Itch continued to require an average period of 12 days for its cure. Within the last few years the neglected plan of treatment has been revived, and with the most surprising results.

I shall conclude by expressing the wish that the Science of Therapeutics be carried to the greatest perfection possible, that disease be combatted in such a manner that health's

precious boon may be the happy portion of
every member of the great human family.
and that the Medical profession having
contributed to this glorious end by the labors
and researches of her generous followers may
attain the highest eminence above all and
every other worldly profession and may the
Laurel wreath be ever worn by them as the
symbol of life's glorious Victory.

John N. Lemar
Dec 29th 1860.

Inaugural Dissertation

on

Tracheotomy

in

Pseudo membranous Croup.

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by

F. E. Beatty.

- 1867 -

The operation of Tracheotomy is by no means a modern one. According to Celsus the invention of Bronchotomy under which term is included both Tracheotomy and Laryngotomy is due to a native of Cilicia who calling himself Asclepiades flourished in Rome about the year B.C. 95.

Antyllus A.D. 340 also advised and performed the operation in cases of threatened Suffocation from disease of the throat.

Paulus Æginete in the Seventh century was the first author who gives a clear account of the manner in which the operation was performed. He first made the incision in the median line the length about

the third or fourth ring, the patient's head must be kept backward, in order that the trachea project more forward. A transverse cut is to be made between two of the rings, so as not to wound the cartilage, only the membrane.

In the beginning of the twelfth century Albucasis an Arabian surgeon performed bronchotomy and proved that divided cartilage will reunite. There is not however to be found any well authenticated case of cure until 1792, in which year John Andre of London successfully performed tracheotomy in a case of croup.

In the latter part of the part and in the beginning of the present century the operation was performed in several instances both in this country and in

Europe and fell into disuse on account of the want of success attending it. It was again revived in France by M. Bretonneau of Tours in 1815 though his first attempts were not crowned with success and it was not until 1825 that the operation completely succeeded in his hands. From his investigations of the pathological character of pseudo-membranous croup he became convinced that the local application of remedies would be addressed to the whole extent of the disease instead of the throat merely, he therefore operated for the double purpose of admitting air into the lungs and thus relieving the lives of his patients while he used the specific into the trachea for the better

application of his topical remedies.

In 1826 Mr. Trousseau became an advocate of tracheotomy and in 1833 published in one of the French journals an account of his first successful case. Since that period the operation has been performed in croup by most of the distinguished surgeons of France, by Lawrence, Liston, Carmichael of Great Britain and Pancoast, Smith, Atlee and others of our own country.

Having thus given a short account of the history of tracheotomy let us now proceed to examine some of the arguments both for and against it in croup.

I The operation has been objected to on account of its want of success. Dr West says the result in England

has been so unfavourable that the operation is scarcely looked on as a justifiable proceeding. Dr Porter remarks, I have known and heard of it often, but never understood that it produced a recovery. Mr Ryland on the 115 page of his work on the Larynx and Trachea remarks I have no hesitation in saying that the results are so unfavourable as to warrant us in the strongest condemnation of it in almost every conceivable circumstance. Dr Cheyne and others in England, and Eberle, Dewees and Physick in America also opposed it.

In answer to this mass of testimony against the success of tracheotomy I beg to refer to some tabular statements.

In a paper by Dr Johnson of Georgia in the Medical Examiner for January

1829 will be found a table of two-
hundred + one operations performed prin-
cipally by French surgeons with fifty-
four cures or one in every three + thirteen
eighteenths. but the author with a com-
mendable spirit of fairness in order
to allow for any deficiency that may
exist increases the number of operations
to two-hundred + forty nine with fifty-four
cures or one in four & eleven eighteenths.

During 1850 M. Durand performed
tracheotomy forty times with eleven re-
coveries. Again in L'Union Medicale 1851.
M. Trousseau gives the number of cases
in which he has operated as one hundred
+ sixty-nine with forty three recoveries or
a little more than a fourth. In the last
eighteen of these there had been eight
recoveries. From 1827 to 1855 he operated

twenty-four times in private practice with fourteen cures.

At the Hospital des Enfans of Paris there had been from 1820 to 36 operations performed on two hundred & Sixteen patients of whom forty-seven recovered, almost one fourth, during the latter year the operations numbered fifty-four of whom fifteen were cured, or one in two and nine fifteenths. In the proceedings of the Royal Medico-Chirurgical Society for 1837 is a report of five cases by Mr Fuller of St Georges Hospital in which "the operation was delayed until every remedy had failed & death was imminent". It was followed by recovery in two cases and of the three in which it failed two were jaundiced, while none were nearly moribund at the time of

the operation. Dr Fuller states in the Lancet paper that the number of recorded cases of tracheotomy in croup in England was twenty-two with eight recoveries though he mentions that there was probably some unsuccessful cases not placed on record.

Dr James Spence of Edinburgh has published a paper in which he reports thirteen cases operated on by him in the last suffocative stage, of which number six were saved and in four of the seven fatal cases there was severe complications. Dr Conway Evans an English physician also reports four operations in croup with one recovery.

In the British and Foreign Med-Chir Review for July 1856 is an account of twenty four cases cases of which ten were successful performed in the last stage and

after the persevering employment of the various remedies by Dr Folk, a German practitioner.

Nor in our own country has tracheotomy been entirely wanting in success of late years. In the American Journal of Medical Sciences for April 1849, in a report of five cases of pseudo-membranous croup by Dr J. F. Meyer in three the operation was performed by Prof Pancoast in two of which it was perfectly successful. Of the cases treated without tracheotomy one died. Up to 1852 Dr Pancoast had operated in seven cases with three cures. Within the last year Dr James Prince of New York has had two successful cases in six operations and Dr Ross of the same city has operated on fourteen patients their ages varying

from twenty months to nine years, with five recoveries.

We have thus collected from Journals and other sources from 1824 up to the present time eight-hundred & forty seven cases of Tracheotomy with two hundred & twenty one cures and six hundred & twenty six deaths on one in a little less than four cases, a result that speaks very favourably for the operation.

It must be remembered also that a great many of the cases mentioned above were almost moribund at the of the operation and that some of them were in the crowded wards of city hospitals exposed to measles, Scarlatina and contagious diseases. Ten of those treated on in the Hospital des Enfans in 1832 were attacked with Scarlatina after the

operation. Mr Trousseau thinks (and his experience bears him out) that in private practice the recoveries ought to be one half.

The statistics of the French operators are objected to by the opponents of tracheotomy on the ground that many of their cases were diphtheritic and therefore more favourable for surgical interference. This is denied by the advocates of the operation from the fact that the nature of the accompanying fever, the glandular swellings and oedematous fulness of the neck which often accompany diphtheritic cases are by no means more favourable and from three hundred & eleven post mortems of these cases made in France it has been proved that the pathological effects of the disease present

no greater prospects of success than in cases of inflamatory croup.

II. The operation has been objected to because it is contended by some, and among them so high an authority as Sr Watson, that the false membrane in most cases extends down the trachea and into the bronchi.

This statement is denied by several distinguished writers on croup. Dr. Guersent contends that in a majority of the cases that occur in France the membrane does not extend beyond the trachea and gives as proof a table of one hundred & twenty autopsies in which it was found to have reached the bronchi in only forty-two leaving nearly two thirds in which it was confined to the larynx and trachea. Dr Francis West observes

I have usually observed the false membrane lining the whole of the larynx and reaching down to the lower edge of the thyroid cartilage while the trachea contained nothing else than a puriform matter or flary mucus. Mr Ryland remarks - It is more commonly found in the larynx and upper third of the trachea than in any other situation and it is less usual to meet with it in the bronchial ramifications than in any other part of the air passages. Dr J Forsyth Meigs states that of four autopsies that he has witnessed in two the deposite extended into the bronchi while in one it was confined to the larynx and in the other to the larynx and upper part of the trachea.

It is by no means easy if indeed

it is possible to diagnose with certainty the extent of the false membrane. Auscultation cannot be depended on. It is true the history of the case and of the general symptoms afford us some guide for where the dyspnoea and signs of asphyxia have come on rapidly the disease is probably confined to the larynx and upper part of the trachea and success is most to be expected in those cases which appear as true croup from the first. The constitutional symptoms would also possibly be more severe in those cases in which the deposite extended a considerabl distance into the bronchi. Dr J. F. Meigs also considers that the pulse may be looked upon as something of a criterion as to the extent of the false membrane, being less rapid, not over one

hundred & forty in cases in which it is confined to the uppermost part of the wind pipe.
Dr Folk regards the prognosis as favourable when the depressions below the larynx and at the epigastrium become very marked during inspiration the exaggerated action of the inspiratory muscles augment such depression when the lungs are entirely free, and the obstacle is only placed in the larynx but the smaller amount of such depression is quite remarkable when there is co-existing pneumonia, extensive bronchitis or pulmonary edema.
Nevertheless the diagnosis is confessedly very difficult. Should we therefore hesitate on this account to give the sufferer the only chance for life because it is the opinion of some that in the majority of these cases the membrane extends far

into the bronchi. For even if it does the chances are not impaired. The deposite is often thrown out through the opening and when the patient is not strong enough to do this himself may frequently be removed by the operator. Dr Trousseau has achieved three cures under these circumstances and in one the membrane exhibited casts of several of the ramifications of the bronchial tubes. Dr Watson remarks that after death the membrane is found quite detached in some cases from the mucous membrane so that it might have been expelled without much difficulty if the child could have sufficiently inflated its lungs and the requisite muscular power had remained + no spasmodic irritability of the glottis had supervened. In such cases

the operation would most probably have succeeded.

III. It is charged that the operation frequently gives rise to Pneumonia and bronchitis.

Now that these complications do sometimes arise after Tracheotomy is not to be denied, but that they often supervene without it is also equally true. It is fair therefore to hold the operation responsible for all cases of these complications that occur after its performance. Moreover if due attention is paid to the temperature of the room in which the patient lay and the neck be surrounded by a knitted comforter or piece of muslin into which the patient should breathe so that the inspired air may become impregnated with some of the

warm vapour furnished by expiration as recommended by Trousseau, there is very little if any more probability of pneumonia or bronchitis supervening than there would be without the operation. When it becomes evident in any case that tracheotomy offers the only reasonable hope of relief, there are few we presume who would oppose the operation simply because these complications might arise. The patient is not necessarily to be despaired of if they should supervene though the prognosis would be rendered more doubtful and M. Guersent does not hesitate to operate even if pneumonia be already present provided it is confined to one side. Sr James Spence also states that bronchitis was present in most of his successful cases and thinks that

persists it may be considered favorable as indicating a condition of the mucous membrane less inclined to the formation of plastic exudation.

IV. It is contended that tracheotomy is in itself dangerous to life.

Now it is well known that the operation when performed for the removal of foreign bodies from the air passages is scarcely ever followed by fatal effects, however it must be admitted that the condition of the parts about the neck under these circumstances is quite different from the state in which we find them in croup, the blood vessels are all more or less congested in the latter condition and the probability of hemorrhage is necessarily much greater. The danger is two fold. First from the prostration that any considerable

loss of blood is liable to occasion in one already reduced by the disease and secondly and principally from the convulsive strangulation and suffocation which the admission of blood into the windpipe will produce. both these dangers may however be avoided if the Surgeon proceede with sufficient care. Tracheotomy is not to be rashly performed. Mr. Spence in the article above referred to remarks "there ought to be no attempt at rapidity or brilliancy in this operation, every step should be methodically gone about." If there be a middle thyroid artery it should be carefully tied, any others that may be met with must be secured in the same way, if ligature is not sufficient.

The large thyroid veins are generally

encountered, one on either side the Median line, they should be separated from the adjoining parts and drawn aside if possible, if not should be secured by ligatures and divided. Prussian and other French Surgeons regard the application of ligatures as unnecessary and resort only to pressure by means of a sponge to command the hemorrhage. This will do. All that is necessary in many cases, but when the vessels are of considerable size and the patient much prostrated it would be safer to use the ligature. When the thyroid gland is so low down that it can not be pushed up out of the way of the knife the method of Dr Brainard is preferable. Such consists of throwing ligatures round the isthmus on each side and dividing it between them.

By thus proceeding with caution and

without regard to display all loss of blood and risk of suffocation from it entering the trachea may be avoided -

In performing this operation the incision is usually made in the median line from the cricoid cartilage to the top of the sternum Bouisson recommends that it incline to the left side of the trachea below to avoid all risk of wounding the arteria innominata. The skin and fascia being divided, the sterno hyoid and sterno thyroid muscles are to be separated with the handle of the knife if possible, if not with its edge. the sheath of the trachea is then to be slit up. If there is no immediate danger and the hemorrhage is considerable the tube should not be opened for a few minutes, but if suffocation be imminent it may at once be incised as it is a well established

fact that as soon as the air is admitted into the lungs the hemorrhage although it may have been considerable before, almost entirely ceases. The trachea is usually opened in the following manner, a puncture is made with a blunt pointed bistoury a probe pointed one is then introduced and the incision continued from below upwards so as to divide three or four rings, some however complete the opening with the first mentioned instrument.

The entrance of air into the lungs is generally followed by convulsive coughs during which shreds of false membrane and mucus often escape from the incision with great relief to the patient. After these have subsided the double canula may be introduced which should

be of sufficient size to permit the air in inspiration to pass through without any whistling noise. This instrument is objected to by some surgeons because of the irritation its presence in the wind pipe occasions and it is charged with being one of the causes of pneumonia following the operation. Various methods have been devised to do away with it. The removal of an elliptical piece of the substance of the trachea was first practised by Mr Lawrence of London and is now adopted by many surgeons among them Dr Pancoast of Philadelphia who also uses a leaden tie moulded to fit the neck with the ends bent to a little more than a right angle to draw the sterno thyroid muscles and their coverings apart and keep the soft parts

from closing over the opening. Blunt hooks are also employed by some to keep the incision open and Dr. Brainard recommends that a small curette be armed with a ligature be inserted beneath two of the rings of the trachea and a semicircular incision be made on one side so as to form a valve readily raised by drawing on the thread. The opening thus formed can be kept patent or be allowed to close at will. Either of these methods may be adopted to provide a pervious entrance of air into the lungs.

The after treatment is a subject about which there is a great difference of opinion but at the same time one of the utmost importance. Dr. Trousseau used formerly to cauterize the mucous membrane

either by swabbing out the trachea three times the first day and twice the two following with a solution of Nit of Silver of the strength of a scrupl to the ounce of distilled water, or by instilling two or three times for the first three days fifteen or twenty drops of a solution of six grains to the ounce. He has however of late years abandoned the application of the caustic solution to the trachea and bronchi and now advises that after the operation all medical treatment be discontinued, that the patient be sustained by a nourishing diet, and that the wound be penciled every day with Nit of Silver to prevent the formation of false membrane on its surface, and the inflamation becoming propagated to the cellular tissue and developing erysipelas.

Dr Evans entertaining the opinion that the ordinary mode of termination of fatal cases would be by exhaustion were it not for the mechanical obstruction presented by the exudation, recommends a supporting plan of treatment after the operation and the use of alcohol in small doses at regular intervals. On the other hand Dr Fuller maintains that in almost all the successful cases on record, calomel, antimony &c have been persevered in after the operation and that the depression which accompanies the later stages of the disease is that of asphyxia which the admission of air is to remedy and not the exhibition of stimulants.

Dr Spence of Edinburgh considers emetics of Ipecacuanha very beneficial when there

is much bronchial effusion but under no circumstances can lays antimony. He also recommends counter-irritation in these cases, and sensibly advises the diet to be adapted to the condition of each patient.

The safest course would be to regulate the after-treatment according to the demands of each individual case and be guided entirely by the symptoms and not by the dictum of any writer.

Another debated question is at what period of the disease should tracheotomy be performed. Some surgeons recommend it early, while others consider it only justifiable when the patient is almost moribund. No fixed rule can be adopted as to the time, whenever other remedies have had a fair

trial and have failed to remove the impending asphyxia and afford relief and the existing symptoms warn that it would be useless to push them farther, the time for the performance of the operation has arrived and delay may remove the only chance of life.

The following complications are generally considered contra-indications to the operation. Double pneumonia, tuberculous affections of the lungs, Extreme prostration from the two free use of blood-letting and by some pneumonia of one side and bronchitis.

Let us now in in conclusion briefly look at some of the advantages that may be expected from tracheotomy.

It undoubtedly prolongs the life of the patient and gives time for the

application of remedies.

By admitting air into the lungs and providing a mode of exit, it affords the patient a means of expelling the false membrane.

When the treatment has failed by removing the existing disease, generally the immediate cause of death it gives the patient another chance of life and if it does not save more in a great measure the horrors of suffocation.

It has been successful in numerous instances in rescuing from certain death patients that could have been saved by no other means.

In croup that often such inducements in a disease. In most distressing that the physician is

called on to witness can not but be considered one of the greatest boons conferred by science on suffering humanity and is by no means one of the least of that long catalogue of benefits for which the world is indebted to the Medical Profession.

J.C.B.